CHIGNIK MANAGEMENT AREA
ANNUAL FINFISH MANAGEMENT REPORT, 1998

Regional Information Report No. 4K00-41

Alaska Department of Fish and Game
Division of Commercial Fisheries
211 Mission Road
Kodiak, Alaska 99615

May 2000

CHIGNIK MANAGEMENT AREA ANNUAL FINFISH MANAGEMENT REPORT, 1998

By

David L. Owen
David R. Sarafin
George E. Pappas
and
Robert T. Baer

Regional Information Report[1] No. 4K00-41

Alaska Department of Fish and Game
Division of Commercial Fisheries
211 Mission Road
Kodiak, Alaska 99615

May 2000

[1]The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished division reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Division of Commercial Fisheries.

ACKNOWLEDGMENTS

The authors express their appreciation to the following seasonal employees: Alan Marisighan, Cordelia Ray, David Kaplan, Mary Bingham, Keith Terstegge, and pilot Scott Moyer who worked many long days and irregular hours to keep the Chignik weir operational. Pete Probasco and Wayne Donaldson's aid and supervision during the season were also appreciated. Thanks to Ivan Vining and Jim Blackburn for biometric support and review. Thanks to Charlie Swanton for constructing the run forecast. Thanks to Rod Campbell and Arnie Shaul for their input on the southern Alaska Peninsula. We also appreciate the assistance from Jim Fall, Jim McCullough and Lisa Scarbrough on subsistence issues. We also thank Lucinda Neel and Joanne Shaker for their technical support. Funding for operation of the weir in late August and September was made available through the Exxon Valdez Oil Spill Trustee Council (EVOS), Civil Settlement funds administered by the Department of Community and Regional Affairs.

TABLE OF CONTENTS

Page

LIST OF TABLES i

LIST OF FIGURES v

LIST OF APPENDICES vi

CHIGNIK SALMON FISHERIES 1

Introduction 1

Overview of the 1998 Salmon Season 1

1998 Catch Overview 1
1998 Escapement Overview 2
1998 Exvessel Value 3

Chinook Salmon 4

Background 4
1998 Forecast 4
Historical Escapement, Harvests, and 1998 Management 4

Sockeye Salmon 5

Background 5
1998 Forecast 6
Historical Escapement, Harvests, and 1998 Management 7
Inriver Management 7
Chronology for June and Early July Inseason Management of the Chignik Sockeye Salmon Fishery 7
Inseason Scale Pattern Analysis of Chignik Sockeye Salmon 8
Chronology for the Late Season Sockeye Salmon Fishery 8
Cape Igvak Sockeye Salmon Fishery 10
Southeastern District Sockeye Salmon Fishery 10
Postseason Scale Pattern Analysis of Chignik Sockeye Salmon 11
Season Summary 11

Pink and Chum Salmon 12

Background 12
1998 Forecast 12
1998 Management and Harvests 13

TABLE OF CONTENTS (Cont.)

Page

Coho Salmon 14

Background 14
1998 Forecast 14
1998 Management and Harvests 14

Subsistence Salmon Fisheries 15

Personal Use of the Commercial Catch 15

CHIGNIK HERRING FISHERIES 15

Background 15

1998 Management and Harvests 16

OTHER SPECIES (NON-COMMERCIAL) 16

LITERATURE CITED 17

TABLES 18

FIGURES 141

APPENDIX 157

LIST OF TABLES

Table		Page
1.	List of permit holders who fished in the Chignik Management Area, 1998	18
2.	Alaska resident vs. non-resident ownership of permits in the Chignik Management Area, 1966-1998	20
3.	Commercial salmon catches in the Chignik Management Area by district, statistical area, and species, 1998	21
4.	Commercial salmon catch by day and effort in the Chignik Management Area, 1998	22
5.	Commercial fishing effort and catch by statistical area and day in the Chignik Management Area, 1998	25
6.	Comparison of average weights of salmon, based on weights from fish tickets, caught in the Chignik Bay District and all other districts combined, 1983-1998	37
7.	Salmon processors in the Chignik Management Area, 1998	39
8.	Commercial salmon catches in the Chignik Management Area by year, 1960-1998	40
9.	Estimated salmon escapement by district and statistical area in the Chignik Management Area, 1998	41
10.	Chinook salmon daily and cumulative escapement estimates through the Chignik weir by day, 1998	42
11.	Sockeye salmon daily and cumulative escapement through the Chignik weir by day, 1998	43
12.	Pink, chum, coho, and sockeye jack salmon daily and cumulative escapement through the Chignik weir by day, 1998.	45
13.	Economic value of salmon and average income per commercial salmon permit holder, in dollars, in the Chignik Management Area, 1970-1998	48
14.	Chignik River chinook salmon escapement, Chignik Management Area catch, and total run, 1960-1998	50

LIST OF TABLES (Cont.)

Table		Page
15.	Sockeye salmon age composition for Black Lake from scale samples collected at the Black Lake outlet, 1998	51
16.	Sockeye and chinook salmon age compositions for Chignik Lagoon as determined from Chignik Lagoon commercial fishery scale samples, 1998	52
17.	Sockeye salmon escapement through the Chignik River weir for Chignik Lake and Black Lake using daily percentages attributable to Chignik Lake, derived from the inseason scale pattern analysis and time of entry curve, 1998	53
18.	Harvest of Chignik bound sockeye salmon in the Chignik, Cape Igvak, and Southeastern District Mainland Areas from 1964-1998	56
19.	Total Chignik Management Area and 80 percent of the sockeye harvest in the Cape Igvak and Southeastern District Mainland Areas through July 25, and season's total for each area, 1964-1998	59
20.	Estimated stock composition of age 1.3 Chignik sockeye salmon from commercial catch and test fishery samples, based on postseason scale pattern analysis, 1998	60
21.	Estimated stock composition of age 2.3 Chignik sockeye salmon from commercial catch and test fishery samples, based on postseason scale pattern analysis, 1998	61
22.	Daily Chignik River sockeye escapement, catch destined to the Chignik Lakes system, and total run, by day and area (adjusted to Chignik Lagoon date), 1998	62
23.	Daily and cumulative sockeye salmon escapement and catch as determined by postseason scale pattern analysis for the Black Lake stock (adjusted to Chignik Lagoon date), 1998	65
24.	Daily and cumulative sockeye salmon escapement and catch as determined by postseason scale pattern analysis for the Chignik Lake stock (adjusted to Chignik Lagoon date), 1998	67
25.	Black Lake weekly sockeye salmon escapement, by age class, estimated by postseason scale pattern analysis, 1998	70

LIST OF TABLES (Cont.)

Table		Page
26.	Chignik Lake weekly sockeye salmon escapement, by age class, estimated by postseason scale pattern analysis, 1998	71
27.	Black Lake weekly sockeye salmon catch, by age class, estimated by postseason scale pattern analysis, 1998	73
28.	Chignik Lake weekly sockeye salmon catch, by age class, estimated by postseason scale pattern analysis, 1998	74
29.	Black Lake and Chignik Lake sockeye salmon escapement, catch, and total run estimates, by age class, based on postseason scale pattern analysis, 1998	76
30.	Sockeye salmon escapement, catch, and total run for Black Lake, Chignik Lake, and combined runs, based on postseason scale pattern analysis, 1954 - 1998	77
31.	Black Lake and Black River tributaries peak aerial sockeye salmon survey escapement estimates, 1960-1998	78
32.	Pink salmon catch, escapement, and run numbers (in thousands of fish) in the Chignik Bay District, 1962-1998	80
33.	Pink salmon catch, escapement, and run numbers (in thousands of fish) in the Central District, 1962-1998	81
34.	Pink salmon catch, escapement, and run numbers (in thousands of fish) in the Eastern District, 1962-1998	82
35.	Pink salmon catch, escapement, and run numbers (in thousands of fish) in the Western District, 1962-1998	83
36.	Pink salmon catch, escapement, and run numbers (in thousands of fish) in the Perryville District, 1962-1998	84
37.	Total pink salmon catch, escapement, and run numbers (in thousands of fish) in the Chignik Management Area, 1962-1998	85
38.	Chum salmon catch, escapement, and run numbers (in thousands of fish) in the Chignik Bay District, 1962-1998	86

LIST OF TABLES (Cont.)

Table		Page
39.	Chum salmon catch, escapement, and run numbers (in thousands of fish) in the Central District, 1962-1998	87
40.	Chum salmon catch, escapement, and run numbers (in thousands of fish) in the Eastern District, 1962-1998	88
41.	Chum salmon catch, escapement, and run numbers (in thousands of fish) in the Western District, 1962-1998	89
42.	Chum salmon catch, escapement, and run numbers (in thousands of fish) in the Perryville District, 1962-1998	90
43.	Total chum salmon catch, escapement, and run numbers (in thousands of fish) in the Chignik Management Area, 1962-1998	91
44.	Pink salmon return per spawner in the Central and Eastern Districts, 1962-1998	92
45.	Pink salmon return per spawner in the Western and Perryville Districts, 1962-1998	92
46.	Chum salmon return per spawner in the Central and Eastern Districts, 1962-1998	93
47.	Chum salmon return per spawner in the Western and Perryville Districts, 1962-1998	93
48.	Salmon escapement survey counts in the Chignik Management Area, 1998	94
49.	Pink and chum salmon escapement estimates (in thousands of fish) for select Chignik Management Area streams, 1953-1998	130
50.	Estimated subsistence harvests of salmon, Chignik Management Area, 1976-1998	138
51.	Number of permits, landings, and salmon species harvested for personal use in the commercial salmon fishery in the Chignik Management Area, 1998	139
52.	Dolly Varden daily and cumulative escapement through the Chignik weir by day, 1998	140

LIST OF FIGURES

Figure		Page
1.	Map of the Alaska Peninsula illustrating the relative location of the Chignik, Kodiak, and South Peninsula Management Areas	141
2.	Map of the Chignik Lake watershed with inset of western Alaska	142
3.	Map illustrating district boundaries and village locations within the Chignik Management Area	143
4.	Map of Chignik Management Area illustrating district boundaries	144
5.	Total salmon harvests by species in the Chignik Management Area, 1960-1998	145
6.	Exvessel value of the salmon harvested in the Chignik Management Area, 1970-1998	146
7.	Average economic value of salmon per Chignik Management Area permit holder, 1970-1998.	147
8.	Chinook salmon catch and escapement in the Chignik Management Area, 1960-1998	148
9.	Age composition of sockeye salmon sampled in the Chignik Lagoon fishery, 1998	149
10.	Daily sockeye salmon run by stock to the Chignik Lakes system as estimated by scale pattern analysis, 1998.	150
11.	Black Lake (upper panel) and Chignik Lake (lower panel) sockeye salmon catch and escapement, 1954-1998	151
12.	Total sockeye salmon runs to Black and Chignik Lakes, 1954-1998	152
13.	Pink salmon catch and escapement in the Chignik Management Area, 1962-1998	153
14.	Chum salmon catch and escapement in the Chignik Management Area, 1962-1998	154
15.	Coho salmon catches in the Chignik Management Area, 1960-1998	155
16.	Pacific herring harvests in the Chignik Management Area, 1980 – 1998	156

LIST OF APPENDICES

Appendix		Page
A.1.	Chignik Management Area salmon forecasts, 1998	158
A.2.	Comparison of Black Lake (early-run) and Chignik Lake (late-run) forecasts versus actual runs in millions of sockeye salmon, 1987-1998	161
B.1.	Total sockeye salmon return to Black Lake by brood year and age, 1915-1998	162
B.2.	Total sockeye salmon return to Chignik Lake by brood year and age, 1915-1998	165
C.	Chignik River system sockeye salmon escapement goals for the early run (primarily Black Lake) and the late run (primarily Chignik Lake) by time period.	168
D.	List of management actions (emergency orders) and dates of actions, duration of actions, and districts in which actions occurred for the Chignik Management Area, 1998	169
E.	Chignik salmon regulations, 1998	171
F.	Chignik herring regulations, 1998	177

CHIGNIK SALMON FISHERIES

Introduction

The Chignik Management Area (CMA) includes all coastal waters and inland drainages of the northwest Gulf of Alaska between Kilokak Rocks and Kupreanof Point on the south side of the Alaska Peninsula (Figure 1). The CMA is bordered by the Alaska Peninsula Management Area to the west and the Kodiak Management Area to the east. The CMA includes approximately 100 salmon producing streams. The Chignik River system is the largest sockeye salmon producer within the CMA (Figure 2). The Chignik River weir facility is located three miles from Chignik Lagoon and is the home base for all commercial salmon and herring management operations in the CMA. The weir was first installed in 1922, and is a 350' pile driven structure that spans across the Chignik River.

Within the CMA, commercial and subsistence salmon are the economic mainstay for five villages: Chignik Lake, Chignik Lagoon, Chignik Bay, Perryville, and Ivanof (Figure 3). The CMA is divided into five districts from, east to west: the Eastern, Central, Chignik Bay, Western, and Perryville Districts (Figure 4). Permit holders and crewmembers reside in all villages, while shoreside processing is located only in the City of Chignik Bay.

Purse seines are the only legal commercial salmon gear type allowed within the CMA. In 1998, 85 of a total of 103 limited entry salmon permits were actively fished in the CMA (Table 1) with 82.4% of the permit holders claiming Alaska residency (Table 2).

Five species of Pacific salmon are commercially harvested in the CMA: chinook *Oncorhynchus tschawytscha*, sockeye *O. nerka*, pink *O. gorbuscha*, chum *O. keta*, and coho *O. kisutch* salmon. The Alaska Department of Fish and Game (ADF&G), Division Commercial Fisheries, manages the CMA commercial salmon fisheries to achieve biological escapement goals (BEGs) for each species, and allows for orderly fisheries to harvest any salmon surplus to escapement requirements.

This annual report adds to a report series dating back to 1922. Information has been updated from historic electronic databases after 1970. Disparities between previously reported catch and escapement statistics and those presented here can be attributed to the editorial objective of providing the most accurate information available.

Overview of the 1998 Salmon Season

1998 Catch Overview

The 1998 CMA commercial salmon fishing season was characterized by a below average total harvest of sockeye salmon. There were 1,054,172 sockeye salmon harvested in 1998 where as the previous 10-year average (1988–1997) was 1,499,030 sockeye salmon harvested in the CMA (Table 8). The low harvest numbers were due in part to a weak sockeye run to Black Lake, a

slightly below average sockeye run to Chignik Lake, and an extended strike between fishers and processors which delayed the sockeye salmon commercial fishery. The CMA commercial fishery was initially opened on June 16. Other than one day of fishing by the Chignik Seiners Association cooperative on June 18, no commercial fishing occurred until June 29.

During most of 1998, the department implemented the following schedule for the Chignik Lagoon openings: 1) initial openings were only allowed up to south of a line from Hume's Point to Chignik Island markers, 2) after 24 hours the markers were then moved to Mensis Point, which is in the mouth of the Chignik River. This allowed for additional escapement because salmon holding between Hume's Point and Mensis Point were given an extra day to migrate upriver and escape the commercial fishery.

Throughout the season the Central and Chignik Bay Districts were opened concurrently. Through July 12 the Eastern District was also opened concurrently with the Chignik Bay District. The Eastern District was closed from July 12 through July 26 to increase pink and chum salmon escapement. Little fishing occurred after July 26 in the Eastern District because of the unavailability of a market for water-marked pink salmon.

In the Western and Perryville Districts, the first commercial fishery opened on July 13 as a commercial test fishery. This fishery opening served as a means to gauge pink and chum salmon run strength through commercial harvests. As the season progressed, commercial openings were warranted as pink and chum salmon interim escapement goals were achieved. The last commercial fishing in the Western and Perryville Districts occurred on August 20. This early closure was utilized by the department to enhance coho escapement to the Kametolook River as well as other streams in these two districts.

The total 1998 commercial salmon harvest (all-species) in the CMA of 2.1 million salmon (Tables 3-6), was processed by two processors (Table 7). This is approximately 1.0 million less fish than the 1988-1997 average catch of 3.1 million fish (Table 8; Figure 5). Comparison of the 1998 commercial salmon catch by species to the average catch from 1988-1997 in the CMA was as follows: the chinook salmon catch of 4,395 was 37% lower, the sockeye salmon catch of 1,054,172 was 30% lower, the coho salmon catch of 129,512 is 38% lower, the pink salmon catch of 776,988 was 32% lower, and the chum salmon catch of 128,841 was 36% lower (Table 8).

The 1998 harvests for all salmon species was also below the preseason harvest forecasts. The chinook salmon harvest was 37% less than the forecast, the sockeye salmon harvest was 2% less than the forecast, the coho salmon harvest was 45% less than the forecast, the pink salmon harvest was 29% less than the forecast, and the chum salmon harvest was 52% less than the forecast (Table 8; Appendices A.1-A.2).

1998 Escapement Overview

Fish were counted through the Chignik River weir from May 24 until September 4 when the weir was removed for the season. Since 1996, fish have been enumerated later in the season than in any other years since the late 1950s. Funding for operation of the weir in late August and early

September was made available through the Exxon Valdez Oil Spill Trustee Council (EVOS), Civil Settlement funds administered by the Department of Community and Regional Affairs. Funding for late escapement counts will continue through the 2003 season.

Escapement was estimated by video weir counts on the Chignik River and by aerial surveys for all other streams. Video weir counts were conducted with use of an underwater camera, video monitor, and recording devices. Observers of the video monitoring equipment enumerated fish for a predetermined time period. The total number of fish counted from each time period was then extrapolated to account for the fish escapement when the monitoring equipment was not in use. Escapement to most streams for all species (except perhaps coho) met or exceeded peak count escapement goals. Goals for coho are not established because of the late fall run timing when streams are inadequately surveyed because of weather, stream turbidity, and budget constraints.

Chinook salmon escapement was estimated at 3,075 to the Chignik River, 1,625 fish above the established BEG of 1,450 (Table 10). Sockeye salmon escapement to the Chignik Lakes System was estimated at 701,128 fish, 51,128 over the June 1 through August 31 BEG of 650,000 sockeye salmon (Tables 9, 11). Pink salmon (11,490), chum salmon (156), and coho salmon (14,124) escapements were estimated through September 4 as they passed through the Chignik River weir (Table 12). For all other streams in the CMA the pink, chum, and coho salmon escapement estimates were assessed by aerial surveys (Table 9). There was an estimated total escapement of 1,881,779 pink salmon in the CMA for the 1998 season. The estimated chum salmon total escapement was 379,152. Aerial surveys for coho are incomplete due to fall storms leaving streams flooded and turbid thus an area wide estimate was not developed. The post weir escapement estimate for the Chignik Lakes system was 27,821 coho salmon through September 15.

Inseason and postseason sockeye salmon scale pattern estimates indicated that the first run was far below average (peak late June) and the transition from Black Lake to Chignik Lake stock occurred on July 6 (50/50 stock composition). After that date, management emphasis shifted from primarily attaining the Black Lake sockeye salmon escapement to that destined for Chignik Lake. The Hatchery Beach portion of the Chignik Lake run, which usually travels through the fishery from mid July to early August, was slightly below average. The Clark River portion of the run was also below average as evidenced by the low sockeye counts in September and the high percentage (50%) of age 2.2 sockeye salmon which are believed to spawn in areas other than Clark River.

The general rhythm of both pink and chum salmon escapement throughout the season was a steady flow. Aerial survey data indicate that the Chignik area wide peak pink salmon (780,000 fish) and chum salmon (207,000 fish) escapement goals were met.

1998 Exvessel Value

The exvessel value of the 1998 commercial salmon harvest was $7.5 million, about $7.4 million less than the 1988-1997 average exvessel value of $14.9 million (Table 13; Figures 6-7). The approximate value per permit for the 1998 season was $88 thousand, which is approximately $60 thousand less than the 1988-1997 average.

Chinook Salmon

Background

The CMA chinook salmon catch occurs primarily in the Chignik Bay District, and the escapement is limited primarily to the Chignik River system (Tables 3 and 9). The Chignik River is the largest chinook salmon producing system on the south side of the Alaska Peninsula (Figure 2). There is no directed chinook salmon fishery within the CMA. Most incidental harvests of chinook salmon peak in July as fishers target sockeye salmon.

A brood table, based only on a few years of age class data from small sample sizes, has been used to establish an initial Chignik River system BEG of 1,450 fish. To ensure the BEG is met, the department's inriver goal of 1,950 chinook salmon allows for a projected sport and subsistence harvest of 500 fish. If escapement in early July is weak and escapement goals are not likely to be met, the Hume's Point markers may be used to enhance escapement. Normally 50% of the chinook escapement passes through the weir by July 11.

1998 Forecast

Preseason chinook harvest projections, estimated at 7,000 salmon in 1998, were dependent upon the amount of fishing time allowed for sockeye salmon harvest in July. This projection approximated the 10-year (1988-1997) harvest average of 6,956 salmon (Table 14). This includes two anomalous years (1992 and 1993) which had very large escapements.

Historical Escapement, Harvests, and 1998 Management

Chinook salmon runs (catch and escapement) to the Chignik River have ranged from a low of 927 fish in 1974 to a high of 21,461 fish in 1993 (Table 14; Figure 8). Commercial catches have increased from an average of 1,215 fish (1968-1977) to 6,956 fish (1988-1997; Table 8). A corresponding increase in escapement has also occurred from an average of 1,147 fish (1968-1977) to 3,739 fish (1988-1997; Table 14).

The 1998 CMA chinook salmon harvest of 4,395 fish was below the 1988-1997 average of 6,956 (Table 14; Figure 8). The commercial chinook salmon harvest occurred from June 29 to September 15 with a peak harvest of 215 on July 6 (Table 4).

The 1998 chinook salmon escapement of approximately 3,075 fish was 664 less than the 1988-1997 average escapement of 3,739 (Table 14). The escapement counts were not adjusted for chinook salmon which were removed by the sport fishery, chinook salmon utilized for personal or subsistence use, or those that spawned below the counting weir.

The total exvessel value of the 1998 chinook salmon harvest was estimated at $32,000 averaging $376 per permit holder (Table 13; Figures 6-7).

Sockeye Salmon

Background

Economically, sockeye salmon are the most important commercial salmon species in the CMA. The commercial salmon fishery targets two runs of sockeye salmon that return to the Chignik River system. The early sockeye salmon run is mostly composed of the Black Lake stock while the late run is primarily made up of the Chignik Lake stock. Sockeye salmon destined for the Chignik and Black Lakes system are also harvested outside the CMA in two historic Alaska Board of Fisheries (BOF) approved fisheries: from the east in the Cape Igvak Section of the Kodiak Management Area; and from the west in the Southeastern District Mainland of the Alaska Peninsula Management Area.

Most CMA sockeye salmon production originates from the Chignik Lakes system. The Aniakchak River tributaries (Albert Johnson Creek) and Surprise Lake, however, also support small sockeye salmon runs. Tagging studies conducted over several years in Aniakchak Bay and Cape Kumlik areas indicate that sockeye salmon harvested in these waters are almost exclusively bound for the Chignik-Black Lakes system (Lechner 1969). Consequently, the Eastern District management strategy is based on the sockeye salmon run strength of the Chignik-Black Lakes system which commercially opens during June concurrently with the Chignik Bay and Central Districts. This management strategy has been approved by the BOF and enacted into regulation as the Eastern District Management Plan (5 AAC 15.360, ADF&G).

The upper range of BEGs for sockeye salmon are 400,000 fish for Black Lake and 250,000 fish for Chignik Lake. Commercial fishing time for sockeye salmon is regulated on achieving interim escapement goals by specific dates for each run (Owen 1998a). Achieving these goals is complicated due to overlap of the two runs (transition period).

The transition period from early run (Black Lake) to late run (Chignik Lake) fish generally occurs between June 26 through mid July. Management biologists assess age and stock composition of the catch to estimate which stock is dominant at various times during this period. Catch sampling efforts are increased from once a week to every third day to assess the changing age and stock composition. Subsequent to sampling results, fishing time may be increased to harvest early run fish or may be decreased to allow time for evaluating the late run strength.

Two methods have been developed to estimate the daily proportion of each run during the transition period. The first is based on tagging studies conducted from 1962-1966 (Dahlberg 1968). These studies allowed biologists to develop an average time of entry (ATOE) curve to apportion the two Chignik sockeye salmon runs into the early and late run components. The second method is based on differential growth between juvenile salmon rearing in Black Lake and Chignik Lake (Burgner and Marshall 1974, Conrad 1983). Sockeye salmon fry rearing in Black Lake (early run) emerge earlier and grow at a faster rate than fry rearing in Chignik Lake (late run) (Narver 1966). The disparity in growth rates between Black Lake and Chignik Lake juvenile salmon is reflected in their scale patterns, which provides a means to separate adults returning to Black Lake from those bound for Chignik Lake.

The latter method, scale pattern analysis (SPA), is currently used inseason and postseason to assign adult sockeye salmon to their stock of origin. After the sockeye age composition is determined, models for the dominant age classes (age 1.3 and 2.3) are constructed using two types of methods: linear discriminate function (LDF) and quadratic discriminate function (QDF). The model that provides the highest balanced classification accuracy is then selected for stock apportionment. However, the inseason age 1.3 fish cannot be directly assessed because the Chignik Lake scale standards (collected from adults on the spawning grounds) cannot be collected until after August 1. Postseason historical age 1.3 age and stock compositions are analyzed and the best fit is applied for the current inseason stock composition estimates.

Generally, results from SPA analysis indicate that the Black Lake run occurs in late May through July, peaking in the third week of June. By contrast, the Chignik Lake run starts in late May and peaks in late July, but continues at diminished levels through November. These generalizations are corroborated, not only by scale pattern analysis, but also from historic Black River weir escapement data, reports from local user groups, and tagging studies (Dahlberg 1968). Subsistence users have reported that a few sockeye salmon spawn in springs of the Clark River (a Chignik Lake tributary) in February (Figure 2).

When constructing SPA models, the sockeye stocks are apportioned using scales that are randomly sampled from the Chignik Lagoon commercial fishery (unknowns, n=100). The standards (knowns, n=200) are seined from the outlet of Black Lake (mid June) and sampled from the Chignik Lagoon commercial fishery (post July 30) when approximately 100% of the salmon are destined for Chignik Lake. However, in years when the Black Lake run is proportionally much larger than the Chignik Lake run, the Black Lake run may constitute a greater proportion of the escapement after July 30 than is now being modeled, since the current model assigns 100% apportionment to Chignik Lake after July 30.

Inseason estimates are based on age 2.3 sockeye salmon standards collected from Black Lake in June and from the previous year's post July 30 age 2.2 fish (siblings to this year's age 2.3 Chignik Lake sockeye salmon). Inseason estimates for age 1.3 fish are not possible because the previous year's post July 30 age 1.2 salmon are too scarce to create adequate standards. Therefore, postseason estimates are considered more accurate than inseason because they include standards for both major age classes (age 1.3 and 2.3).

The age composition of the Black Lake run is typically dominated by ages 1.3 and 1.2 fish, and the Chignik Lake run by ages 2.3 and 2.2 fish. Historically, it is unusual for the early run to have many age 2.2 fish or the late run to have many age 1.2 fish (Conrad 1983).

Spawning distribution of the sockeye escapement is documented by aerial surveys, which have been conducted almost every year since 1960.

1998 Forecast

The preseason Black Lake run forecast was based on a multiple linear regression estimate of the historical relationship of the number and length of the prior year's total return of age 1.2 fish, and

the current year's two major age classes (sum of ages 1.3 and 2.3). All other age class estimates are predicted from the most recent 10-year average. These variables were used within a forecast model (Appendices A.1-A.2 and B.1). The total sockeye salmon forecast for the Black Lake run was expected to be 900,000 fish, leaving approximately 500,000 fish available for harvesting.

Historically the Chignik Lake (late-run) forecast accuracy has been variable, and no reliable forecast model has been developed, such as the one used for Black Lake (early run). The late run forecast estimate was based on the average return per spawner estimate for each age class since 1970 (Appendices A.1-A.2 and B.2). The total 1998 sockeye salmon run to Chignik Lake was expected to be 1.1 million fish, of which approximately 850,000 fish would be available for harvest. The combined sockeye salmon run forecast to the Black and Chignik Lakes system was expected to be 2.00 million fish, of which approximately 1.35 million fish were expected to be available for harvest. There was only a 5% difference between the 1998 combined sockeye salmon run and the preseason forecast.

Historical Escapement, Harvests, and 1998 Management

Inriver Management. The Chignik River weir is located three miles upstream from the river mouth which empties into Chignik Lagoon. During 1998 the weir was operational from May 24 through September 4. Underwater video cameras record all fish passing through two fish counting gates installed in the weir. Live video feeds from the underwater cameras are displayed on video monitors inside the main weir office and are archived on high resolution VHS video tapes. From 7:00 AM until MIDNIGHT, weir personnel identify and enumerate all fish which pass by the video cameras during the first ten minutes of each hour from real time video feed. To obtain fish counts from MIDNIGHT until 7:00 AM, each morning weir personnel review the first ten minutes of each recorded hour of video tape. The ten minute counts are extrapolated by multiplying by six to provide an estimate of all fish (by species) passing through the weir during each hour. To ensure that the weir remains fish tight until removal, weekly maintenance dives using SCUBA gear are made on the weir face to clean video cameras, to repair damage, or to check erosion beneath the aluminum panels.

Chronology for June and Early July Inseason Management of Chignik Sockeye Salmon Fishery. In accordance with the annual management plan (Owen 1998a), commercial sockeye salmon fishing is allowed if the cumulative sockeye salmon escapement exceeds the interim goal of 40,000 fish prior to June 12 (Appendix C), and is accompanied by a strong buildup of sockeye salmon within Chignik Lagoon (Owen and Sarafin 1998a).

The escapement on June 12 exceeded the interim goal and was accompanied by a strong buildup in the Chignik Lagoon. The escapement on June 15 exceeded the June 16 escapement goal of 100,000. As a result of the strong escapement numbers the Chignik Bay, Central, and Eastern Districts opened concurrently to commercial fishing on June 16. Although the commercial fishery was open, fishing did not occur from June 19 through June 28 because the Chignik Seiners Association (CSA) decided to strike for higher fish prices. The escapement continued to meet and exceed the desired escapement goals through the month of June. Multiple 24-hour fishery extensions continued through June 27 in the Chignik Bay, Central, and Eastern Districts. On June

28 the escapement through the weir was 460,000 which surpassed the June 30 goal of 400,000 (Table 11, Appendix C). In response to large escapements and lack of fishing effort the fishery was extended 'until further notice' on June 28. Commercial fishing began on June 29 when the strike was settled between fishers and processors.

On July 3 there was an opening in the Ivanof Bay Section of the Perryville District. The fishery was warranted because large numbers of chum salmon were observed during an aerial survey of the Ivanof Bay River. The Ivanof Bay Section opened and had three consecutive extensions which lasted until the evening of July 4. Commercial fishing continued in the Chignik Bay, Central, and Eastern Districts until July 12. There were approximately 280,000 sockeye salmon harvested during the June 16 – July 12 commercial fishery (Table 4).

Inseason Scale Pattern Analysis of Chignik Sockeye Salmon. During 1998, the run transition occurred on approximately July 7 (50% Black Lake / 50% Chignik Lake), as determined by inseason scale pattern analysis (SPA), time of entry curve, and age composition data (Table 17). The inseason SPA model with the highest and most balanced classification accuracy was the linear discriminate function (LDF). It had a mean classification for age 2.3 sockeye salmon of 78%. Scale samples (9,089) collected from the commercial and test fishery in Chignik Lagoon were utilized to determine age composition (Table 16). The proportion of age 1.3 fish peaked at 40% on June 18, trailing off to only 2% at season's end (Table 16 and Figure 9). Age 1.2 fish were not as abundant, peaking at 21% on June 11. Age 2.3 fish peaked at 70% on July 9. The age 2.2 sockeye salmon peaked at the end of the season at 56% on August 26.

Chronology for the Late Season Sockeye Fishery. After July 7, through the end of the season, the management priority shifted towards achieving escapement goals for the Chignik Lake stock (late run). On July 13 the Chignik Bay and Central Districts opened to commercial fishing for a 72 hour period and was extended for an additional 24 hours before closing on July 17 (Appendix D). The fishery was warranted because the Chignik Lake (late run) July 16 interim escapement goal of 80,000 – 90,000 sockeye salmon was exceeded (Appendix C). The closed waters markers were moved south to Mensis Point to provide a larger harvest area for the fleet. In conjunction with the July 13 Chignik Bay and Central Districts opening there were also openings in the Western and Perryville Districts. The openings in the Western and Perryville Districts were extended for 24 hours on July 14 and July 15 before closing on July 16 (Appendix D). The fisheries were initially opened on a commercial test fishery basis and restricted to an area south of a line between Cape Itki to Coal Cape to Cape Alexander. The commercial test fishery and area restrictions were implemented to assess and enhance the pink and chum salmon for the Western and Perryville Districts. The justification of the commercial fishery extensions in the Western and Perryville Districts were based on the evaluation of Chignik Lake sockeye salmon escapement as well as the catch and escapement of pink and chum salmon. Based on aerial surveys, the pink and chum salmon escapement appeared to be about normal, while the catch appeared to be stronger than average. There were 186,000 sockeye salmon, 66,000 pink salmon, and 10,000 chum salmon harvested during the July 13 – July 17 fishing period (Table 4.)

The Chignik Bay and Central Districts were opened to commercial fishing on July 18 and then extended before closing on July 23 (Appendix D). The fishery opening and the extensions were

warranted because the estimated escapement of Chignik Lake sockeye salmon through the weir on July 20 was 147,000 which surpassed the July 21 upper interim escapement goal of 135,000 (Table 17, Appendix C). The Western and Perryville Districts were opened on July 20 and extended before closing on the afternoon of July 23 (Appendix D). The opening and extensions were warranted based on the Chignik Lake sockeye salmon escapement and on the catch and escapement of pink and chum salmon. The total commercial harvest for the July 18 – July 23 fishery is as follows: sockeye salmon 236,487, chum salmon 14,204, and pink salmon 88,836 (Table 4).

The Chignik Bay and Central Districts opened to commercial fishing on July 25 for a 72 hour fishing period (Appendix D). The opening was justified by the Chignik Lake sockeye salmon escapement of approximately 153,176 as of MIDNIGHT July 23 (Table 17). The escapement was expected to surpass the July 26 upper interim goal of 180,000 (Appendix C). The Eastern, Western, and Perryville Districts opened on July 26 for a 48 hour fishing period (Appendix D). This opening was based on the escapement of Chignik Lake sockeye salmon and the catch and escapement of pink and chum salmon. The pink and chum salmon escapements, assessed by aerial surveys, appeared to be achieving escapement goals.

The Chignik Bay and Central Districts opened to commercial fishing on July 29 for a 72 hour fishing period (Appendix D). This opening was justified by the Chignik Lake sockeye salmon escapement of approximately 193,000 as of the morning of July 29 (Table 17). The escapement was expected to surpass the July 31 upper interim goal of 200,000 (Appendix C). The Eastern, Western, and Perryville Districts opened on July 26 for a 48 hour fishing period (Appendix D). This opening was based on the evaluation of the escapement of Chignik Lake sockeye salmon and the catch and escapement of pink and chum salmon. The pink and chum salmon escapements, assessed by aerial surveys, appeared to achieving escapement goals.

The Chignik Bay and Central Districts opened to commercial fishing on August 2 for a 120 hour fishing period before closing on August 7 (Appendix D). The opening was justified by a Chignik Lake sockeye salmon escapement of approximately 193,000 as of the morning of July 29 (Table 17). The escapement was expected to surpass the July 31 upper interim goal of 200,000 (Appendix C). The Eastern, Western, and Perryville Districts opened on July 30 for a 48 hour fishing period (Appendix D). This opening was based on the escapement of Chignik Lake sockeye salmon and the catch and escapement of pink and chum salmon. The pink and chum salmon escapements, assessed by aerial surveys, appeared to be on track with historical escapements.

A commercial fishery opening occurred in the Chignik Bay and Central Districts on August 9 and was extended on August 13 before closing on August 14 (Appendix D). The Eastern, Western, and Perryville Districts opened on August 10 and were extended on August 12 before closing on August 13 (Appendix D).
A commercial fishery opening occurred in the Chignik Bay and Central Districts on August 16 and closed on August 21 (Appendix D). The Western and Perryville Districts opened on August 16 and closed on August 20 (Appendix D). The Eastern District opened on August 16 and closed on August 21 (Appendix D).

The Chignik Bay, Central, and Eastern Districts opened to commercial fishing on August 23 for a 72 hour fishing period and were extended for an additional 48 hours before closing on August 28 (Appendix D). The 72 hour fishery was warranted in the Chignik Bay and Central Districts because the total escapement through the weir as of the morning of August 21 was approximately 267,000 which surpassed the August 31 escapement goal of 250,000 sockeye salmon. The opening in the Eastern District was warranted because pink and chum salmon escapement counts had surpassed peak inseason escapement goals for most streams.

The Chignik Bay, Central, and Eastern Districts opened and closed on 48 hour fishing periods for the remainder of the season. There were four fishing periods from September 2-4, Sept. 6-7, Sept. 9-10, and Sept. 14-15 when the fishing period ended. This was the last period of the season (Appendix D).

The Chignik Management Area had its last commercial salmon delivery on September 15. Although this was the last day of commercial fishing in the Chignik Management Area, the regulatory season extends beyond September 15. This allows for the possibility of a commercial fishery if sockeye salmon escapement increases enough to support a fishery and meet the late season subsistence "redfish" needs. The 1998 commercial season closed on Tuesday September 15, to conserve sockeye salmon for subsistence use in the Chignik Lake watershed. This decision complied with a compromise agreement between commercial and subsistence users addressing the commercial harvest of the sockeye salmon after subsistence needs are met in Chignik Lake and Clark River. The agreement between the two user groups states that after September 15, if subsistence users have a concern about the availability of sockeye salmon for subsistence use, then the commercial fishery could be curtailed. During the last fishery opening of 1998, the commercial catches were low (100 fish per boat). Because of this, the department concurred with the subsistence users that the sockeye resource may not have been sufficient to meet subsistence needs and closed the fishery for the 1998 fishing season (Tables 4-5, and Appendix D).

Cape Igvak Sockeye Salmon Fishery. The Cape Igvak salmon fishery, located in the Kodiak Management Area, is allocated a percentage of the available Chignik harvest (approximately 15%) when specific biological and harvest criteria are met in Chignik (ADF&G 5 AAC 18.360. Cape Igvak Salmon Management Plan; ADF&G 1996-1998 edition). In order to comply with the biological (achieving escapement goals for the Chignik Lakes System) and allocative requirements (minimum harvest levels in Chignik assured) only very limited fishing was allowed (July 21-25) in 1998. The Cape Igvak fishery harvested an estimated 8,812 Chignik bound sockeye salmon through July 25 (Table 18), which represented 1.0% of the total Chignik sockeye salmon harvest through July 25, well below the 15% allocation.

Southeastern District Mainland Sockeye Salmon Fishery. The Southeastern District Mainland fishery harvested an estimated 66,893 Chignik bound sockeye salmon through July 25 (Table 18). This represents 7.8% of the total Chignik sockeye salmon harvest through July 25. The Southeastern District Mainland sockeye salmon harvest was 1.8% more than the 6.0% allocation (ADF&G 5 AAC. 09.360 Southeastern District Salmon Management Plan; ADF&G 1997-1998 edition).

Postseason Scale Pattern Analysis of Chignik Sockeye Salmon. Postseason SPA age 1.3 and 2.3 models, that were used to assign sockeye salmon to Black Lake or Chignik Lake, were created using LDF and QDF methods to evaluate which type of analysis would provide the best classification accuracy. The linear discriminate models for the age 1.3 and 2.3 sockeye salmon provided the highest balanced classification accuracy of 81% and 82% respectively. Linear discriminate models for the age 1.3 and 2.3 sockeye salmon were utilized for reconstructing the 1998 sockeye salmon run. Stock estimates using these models assigned fish to Black Lake or Chignik Lake from each commercial sample (Tables 20-21). Linear interpolation of the percent composition between sample dates were calculated for catch and escapement values and adjusted to Chignik Lagoon dates (Table 22) resulting in daily escapement and catch estimates for each stock (Tables 23-24).

The Black Lake sockeye salmon postseason SPA escapement estimate of 410,659 was 16,928 more fish than the inseason estimate (Tables 17 and 25) and 10,659 more fish than the Black Lake BEG of 400,000. Chignik Lake escapement estimates include not only salmon counts estimated through the weir but also post weir estimates that are based on statistical analysis of the ratio of the Chignik Lagoon sockeye salmon catch to escapement prior to weir removal. This relationship is then extrapolated to post weir escapement as long as the commercial fishery continues. The year-end Chignik Lake escapement estimate of 290,469 was 40,469 more sockeye than the 250,000 Chignik Lake escapement goal through August 31 (Table 26).

The major age classes, as determined by SPA, which contributed to the escapement and catch of the Black Lake run are listed in Tables 25 and 27. Major age classes as determined by SPA contributing to the escapement and catch of the Chignik Lake run are listed in Tables 26 and 28.

Season Summary. The 1998 total sockeye harvest and escapement was 1.9 million fish (Tables 29-30; Figure 12). This was 5% below the forecasted estimate of 2.0 million total fish return (Appendix A.1-A.2). The sockeye salmon total run for Black Lake was 724,085 fish and for Chignik Lake was 1,217,606 fish. Post season analysis indicated total escapement to both lakes was 701,128 sockeye salmon with 410,659 apportioned to Black Lake and 290,469 apportioned to Chignik Lake (Tables 29-30; Figure 11). Total catch bound to both lakes was 1,240,563 sockeye salmon (includes Igvak and Southeastern District Mainland catch) with 313,426 apportioned to Black Lake and 927,137 apportioned to Chignik Lake (Tables 29-30; Figure 11). Total sockeye salmon harvest within the CMA was 1.2 million fish with an exvessel value of $6.6 million (Tables 8, 13; Figure 6). The average total earnings per permit holder was $88,000 (Table 13; Figure 7). Sockeye salmon harvests by district within the CMA were as follows: 59% in Chignik Bay District, 27% in the Central District, 3% in the Eastern District, 8% in the Western District, and 3% in the Perryville District (Table 3). The harvest of Chignik bound sockeye salmon through July 25 in the CMA was 786,466 (91% of the total), the Cape Igvak Area was 8,812 (1% of the total) fish and the Southeastern District Mainland Area was 66,893 (8% of the total) fish (Table 18).

The sockeye salmon harvested in the CMA were generally smaller this season than the 1988-1997 average size (Table 6). The average weight per sockeye salmon in the Chignik Bay District for the 1998 season was 6.0 lbs. as compared to the 1988 – 1997 average of 6.8 lbs. The average size of the sockeye salmon harvested in all other districts of the CMA were also smaller than the 1988-

1997 average size. The combined 1988-1997 average of all other districts of the CMA was 6.7 lbs. while the 1998 average was 6.2 lbs. (Table 6).

Pink and Chum Salmon

Background

Pink and chum salmon production in the CMA is characterized by variable escapements and returns for both species (Tables 32-49). The variability of the returns may be attributed to the physical morphology of the stream systems, which are characterized by loose substrates and steep gradients. These systems are impacted by fall, winter, and spring floods that may cause streambed scouring, and can result in high egg and fry mortality (Arnie Shaul and Patrick Holmes, personal communication, ADF&G).

Openings in the Eastern, Western, and Perryville Districts from early July through August depend primarily on the abundance of pink and chum salmon (Figure 4). However, openings in the Central and Chignik Bay Districts were based primarily on a directed fishery on the Chignik Lakes system sockeye salmon where pink and chum salmon are caught incidentally.

Management of the CMA pink and chum salmon fisheries is based on inseason aerial assessments of escapement (conducted annually since 1953, Table 48), historical catch data, and catch per unit effort (CPUE) data. Aerial surveys of approximately 100 salmon streams, adjacent bays, and stream mouths are flown regularly throughout the season to provide current inseason escapement indices (Tables 48-49). Postseason escapement indices are estimated for each stream from the inseason aerial observations using area-under-the-curve methodology (Johnson and Barrett, 1988). The estimates assume a 15-day average stream life for pink and chum salmon and a final escapement stream entry date of September 15 (Table 49).

Currently, all salmon processed locally are for the fresh frozen market because there are no operational canning facilities. Consequently, to provide the quality required for fresh frozen processing, the fisheries are managed to harvest migrating fish prior to, or just as they reach terminal waters.

1998 Forecast

The 1998 preseason harvest projections estimated a catch of 1.1 million pink salmon and 270,000 chum salmon (Appendix A.1). The pink forecast was based on the harvestable surplus over the most recent 10-year period. The chum salmon forecast was based on the average returns from escapements 1984 – 1993. Historically the majority of the pink and chum salmon harvests comes from the Western and Perryville Districts. However, unstable stream conditions that create high freshwater mortality and reduce suitable spawning mediums in these districts may have resulted in poor returns from excellent parent year escapements.

1998 Management and Harvests

During June, pink and chum salmon were caught incidentally in openings directed towards the harvest of sockeye salmon. Catches in the Chignik Bay, Central, Eastern District, and Ivanof Bay from June 16 – July 29 were approximately 30,000 pink salmon and 26,000 chum salmon (Table 4; Appendix D.1). Of the 26,000 harvested chum salmon, 14,000 fish were harvested during the July 3- July 4 Ivanof fishery (Table 4). There were three additional fishing periods throughout the month of July, and six fishing periods in August and September. A total of 776,988 pink salmon and 128,841 chum salmon were harvest in the CMA in 1998 (Table 8). Of the total pink salmon harvest 44% were harvested from the Western District (Table 3 and 8).

The 1998 CMA pink salmon estimated total escapement (ETE) of 1,881,779 fish was based on the area-under-the-curve method (Table 9; Figure 13). The distribution and the comparative magnitude of the 1998 escapement to the 1988-1997 escapement average by CMA District is as follows; the Chignik Bay District escapement of 24,407 was approximately 48% less than the average of 47,100 pink salmon (Tables 9 and 32); the Central District escapement of 210,913 was approximately 9% less than the average of 231,500 pink salmon (Tables 9 and 33); the Eastern District escapement of 1,273,170 was approximately 27% greater than the average of 927,600 pink salmon (Tables 9 and 34); the Western District escapement of 150,449 was approximately 12% less than the average of 170,900 pink salmon (Tables 9 and 35); and the Perryville District escapement of 222,840 was approximately 22% less than the average escapement of 287,300 pink salmon (Tables 9 and 36).

The 1998 CMA chum salmon catch was 128,841 (Tables 3; Figure 14). The CMA chum salmon harvest was approximately 141,159 below the forecasted harvest of 270,000 fish, and 72,050 below the 1988-1997 average harvest of 200,891 chum salmon (Table 8; Appendix A.1). Most chum salmon were harvested in the Central District (43,036 fish); the harvest in the remaining districts were as follows: Chignik Bay (7,352 fish), Eastern (5,180 fish), Western (41,425 fish), and Perryville (31,848 fish) Districts (Table 3).

Like pink salmon, the chum salmon total escapement estimate was based on the area-under-the-curve method (Table 43; Figure 14). A total of 379,152 chum salmon escaped to all districts, which is approximately 1% higher than the 1988-1997 average of 373,700 salmon (Tables 9 and 43; figure 14). The chum salmon escapements by district are as follows: Chignik Bay (4,458 fish), Central (31,982 fish), Eastern (97,696 fish), Western (30,555 fish), and Perryville (214,461 fish) Districts (Table 9).

The exvessel value of the pink and chum salmon harvested within the CMA was estimated at $310,323 and $137,647, respectively (Table 13; Figure 6). The average value per permit holder was $3,651 for pink salmon and $1,619 for chum salmon (Table 13; Figure 6).

Coho Salmon

Background

The Chignik Lakes coho salmon run is the largest within the CMA and one of the largest within the Westward Region. Although a directed CMA coho salmon fishery begins in late August to early September primarily in the Chignik Bay District, coho salmon are also harvested incidentally in the directed sockeye, pink, and chum salmon commercial fisheries. The Western District usually accounts for the second highest coho salmon catches in the CMA (Figure 15). Commercial coho salmon catches begin as early as June and normally continue until the fishery closes. From 1960 – 1998, total catches have ranged from 1,292 to 370,420 fish with an overall trend of increasing catches since 1960 (Table 8; Figure 15).

Peak timing for coho salmon catches differs when comparing offshore cape and inshore bay fisheries. Peak offshore catches occur during the targeted pink and chum salmon cape fisheries in late July while peak inshore catches occur in the Chignik Bay District in late August to early September (Tables 4-5). The early coho salmon catches, occurring primarily in the Western and Perryville Districts, have similar average weights as those caught early in Chignik Lagoon. As the season progresses, coho salmon average weights increase dramatically in the outside districts as well as in the Chignik Bay District.

Ivanof Bay of the Perryville District and several streams in the Eastern District also have good coho salmon escapement. Overall, coho salmon escapement monitoring in the CMA is sporadic due to the late timing of the run, poor weather conditions, and the logistics involved in monitoring the numerous streams in this remote area.

1998 Forecast

Coho salmon harvest projections for Chignik Bay and the outside districts were based on a 10-year average. The 1998 coho salmon harvest forecast was 235,000 fish (Appendix A1). Coho salmon harvests are affected by the strength of the Chignik Lake sockeye salmon run and the strength of the pink and chum salmon runs. For example, a weak sockeye salmon second run (Chignik Lake) or a weak pink and chum salmon run could severely curtail the fisheries and, consequently, the incidental harvest of coho salmon would be reduced.

1998 Management and Harvests

The Chignik Lakes coho salmon escapement of 14,124 fish was estimated from weir counts through September 4 (Table 12). Post-weir estimates using catch and escapement ratios prior to weir removal were estimated through September 15 at 13,697, fish for a total estimated coho salmon escapement of 27,821 fish (Table 12). Coho salmon were difficult to count in streams other than the Chignik River in late August because high numbers of pink salmon were still present in CMA streams. Coho salmon aerial surveys during the late season were limited by poor visibility due to high water events and turbid waters (Table 48).

In the CMA, 129,512 coho salmon were caught during the 1998 season (Table 3). This catch was 105,488 fish less than the harvest projection of 235,000 coho salmon (Appendix A.1). The largest coho salmon catches came from the Western District with a total harvest of 55,359 salmon (Table 3). The Mitrofania Section in the Western District produced the largest harvest of coho salmon in the CMA during 1998 (38,725 fish, Table 5). The largest daily catch of 7,685 coho salmon occurred on July 23 (Table 4). The exvessel value of the CMA coho salmon harvest was $397,413 (Table 13; Figure 6). The average value per permit holder was $4,675 (Table 13).

Subsistence Salmon Fisheries

The CMA villages of Chignik, Chignik Lake, Chignik Lagoon, Perryville, and Ivanof rely heavily on local salmon resources for subsistence. Salmon subsistence permits are issued to people in these villages through the Kodiak and Chignik ADF&G offices, Village Public Safety Officers, processors, and ADF&G Subsistence Division personnel. In 1998, 69% of the CMA subsistence permits issued were returned with harvest data. The ADF&G Subsistence Division estimates harvests by a stratified expansion model for each community. In 1998, the CMA subsistence harvest was estimated at 91 chinook, 7,750 sockeye, 1,390 coho, 1,077 pink, and 747 chum salmon (Table 50).

This was the second year the village of Perryville instituted self-imposed harvest restrictions on approximately half (upper reaches) of the Kametolook River during the coho salmon run. ADF&G biologist Jim McCullough, co-principal investigator of the Kametolook Coho Salmon Restoration Project, estimated a total indexed count of 148 coho salmon in the Kametolook River from an October 23 foot survey. Eggs were taken during the fall of 1998 and placed in incubation boxes for coho salmon run enhancement purposes (Scarbrough and McCullough, in press).

Personal Use of the Commercial Catch

Starting in 1995 the Chignik permit holders have been required to record commercial harvested salmon kept for personal use (although no data were available in 1997). There were 108 chinook, 267 sockeye, 27 coho, and 155 chum salmon harvested for personal use in the 1998 CMA commercial salmon fishery (Table 51).

CHIGNIK HERRING FISHERIES

Background

The earliest recorded Pacific herring *Clupea pallasi* fishery in the Alaska Peninsula region was in 1906. During the early herring fisheries, the Chignik area catch was combined with catches from North and South Peninsula areas and labeled as southwestern Alaska catches. During this period, annual herring catches did not exceed 500 tons for all three areas combined. These herring were

harvested with beach seines and marketed as a salted product. This early herring fishery ceased in the late 1930s and did not commence again until 1980, when a sac roe herring fishery developed.

Since 1980, the CMA area sac roe herring fishery has been a low effort, low yield fishery (Figure 16). Prior to 1984, harvests were concentrated in the Big River Section of the Eastern District. This area was closed to commercial herring fishing in 1985 due to low herring abundance and has remained closed. This closure shifted fishing pressure to other areas of the CMA but harvests remained low.

Spawning schools of herring located in small geographic areas (generally a bay or lagoon), are managed as discrete stocks. The projected annual exploitation rate of each of these stocks is dependent on the previous year's biomass estimates (Owen and Sarafin 1998b). Preseason harvest projections may differ from actual harvest levels if inseason information (aerial surveys, catch per unit effort) suggests that the spawning biomass of a discrete stock differs significantly from anticipated levels.

1998 Management and Harvests

A herring sac roe fishery did not take place during 1998 in the CMA. No fishing effort or harvest of herring were recorded for 1998 due to lack of fishing interest. No herring biomass estimates were calculated by the department during 1998.

OTHER SPECIES (NON-COMMERCIAL)

This was the third year Dolly Varden were enumerated through the Chignik weir and data published since state management began in 1960.

Over 15,000 Dolly Varden were counted through the Chignik weir from May 24 until the weir was removed on September 4 (Table 52). Escapement was consistently higher in mid July as compared to any other time period.

LITERATURE CITED

ADF&G (Alaska Department of Fish and Game). Bristol Bay and Westward Alaska Commercial Fishing Regulations Salmon and Miscellaneous Finfish, 1997-1998 edition, Commercial Fisheries Management And Development Division, Juneau.

Burgner, R. and S. Marshall, 1974. Optimum escapement studies of Chignik sockeye salmon. University of Washington, Fisheries Research Institute, Project Report AFC-34, Segment 3, Seattle.

Conrad, R.H. 1983. Management applications of scale pattern analysis methods for the sockeye salmon runs to Chignik, Alaska. M.S. Thesis, Univ. Washington, Seattle.

Cook, R. C. and G. Lord 1978. Identification of stocks of Bristol Bay sockeye salmon by evaluating scale patterns with a polynomial discriminate method. Fish Bull. 76(2):415-423.

Dahlberg, M. L. 1968. Analysis of the dynamics of sockeye salmon returns to Chignik Lakes, Alaska. Ph.D. dissertation. Univ. Washington, Seattle.

Johnson, B. A. and B. Barrett. 1988. Estimation of salmon escapement based on stream survey data: a geometric approach. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K88-35, Kodiak.

Lechner, J. 1969. Identification of red salmon stocks taken in the Cape Kumlik-Aniakchak Bay fishery, Chignik Area, 1967. Alaska Department of Fish and Game, Division of Commercial Fisheries. Informational Leaflet 133, Juneau.

McCullough, James N. 1996. Southeastern District Mainland (Alaska Peninsula Area) Salmon Management Plan, 1996. Alaska Department of Fish and Game, Regional Information Report 4K92-4, Kodiak.

Narver, D.W. 1966. Pelagial ecology and carrying capacity of sockeye salmon in the Chignik Lakes, Alaska. Ph.D. dissertation, Univ. Washington, Seattle.

Owen, D. and R. Sarafin 1998a. Chignik Management Area Commercial Salmon Fishery Management Plan, 1998. Regional Information Report 4K94-17.

Owen, D. and R. Sarafin 1998b Chignik Management Area Commercial sac roe herring fishery management plan, 1998. Regional Information Report 4K94-12.

Ruggerone, G.T. 1989. Coho salmon predation of juvenile sockeye salmon in the Chignik Lakes, Alaska. Ph.D. dissertation, Univ. Washington, Seattle. 151 pp.

Scarbrough, H.L. and McCullough in press. Kametolook River Coho Salmon Subsistence Project, Restoration Project 97247, Annual Report, Kodiak.

Table 1. List of permit holders who fished in the Chignik Management Area, 1998.

	NAME		PERMIT NO.	ALASKA RESIDENCY	VESSEL NAME	ADF&G NO.
1	ALEXANDER	JASON	S01L59000W	NR	CAPT'N JAY	21757
2	ANDERSON	JULIUS	S01L55433H	R	CHRISTINA J	41205
3	ANDERSON	AARON	S01L56203U	R	VENTURE	33848
4	ANDERSON	DAVID	S01L56415U	R	GYPSY LADY	61550
5	ANDERSON	RODNEY	S01L56936B	R	ENDURANCE	64123
6	ANDERSON	GEORGE	S01L57133E	R	ALICE A	33375
7	ANDERSON	AL	S01L57160U	R	ALYSA JUNE	61634
8	ANDERSON	GARY	S01L57501K	R	JANET LYNNE	53370
9	ANDERSON	DEAN	S01L60114M	NR	SIERRA GALE	60913
10	ANDERSON	EUGENE	S01L60601G	R	RAY MAR	31492
11	ASTOR	CRAIG	S01L59794I	R	DREAMER	41317
12	BRANDAL	HENRY	S01L50032K	R	ORIOLE	15888
13	BRANDAL	ALEC	S01L55170U	R	ALEXANDRIA	32586
14	BUMPUS	DONALD	S01L61910L	NR	KIMBERLY DAWN	59651
15	BURKHART	GLEN	S01L56935J	R	RESURRECTION	45469
16	CAMPBELL	ANGUS	S01L55731X	NR	TORI-ANNA	58196
17	CARLSON	EUGENE	S01L55520P	NR	SEA GRIT	21855
18	CARLSON	GARY	S01L56192Z	R	AARON C	21898
19	CARLSON	ERNEST	S01L57125P	R	DESPERADO	43775
20	CARLSON	DALE	S01L57473V	R	LADY DIANE	43370
21	CARLSON	RODERICK	S01L57704F	R	SONDRA	55545
22	CLUTTER	JOHN	S01L57695S	R	DIANA	51282
23	CONSTANTINE	JOHNNY	S01L57808I	R	EDDIE LEE	7024
24	COWGILL	JOHN	S01L57469C	NR	VICTORIA	51091
25	ERICKSON	CLARENCE	S01L56512B	R	SHARON LEE	53266
26	GREGORIO	TONY	S01L58848X	R	ANTOINETTE RENA	37548
27	GRUNERT	CLEMENS	S01L50332L	R	ADVENTURESS	42335
28	GRUNERT	FRANK	S01L59851X	R	KURT ELDON	61416
29	GRUNERT	MICHEAL	S01L55935K	R	CAPT'N SAM	59482
30	HANSEN	RANDALL	S01L55954N	NR	MICKEY H	61758
31	HATCH	ARNE	S01L60183F	R	MISS MELODY	61676
32	HINDERER	WALLACE	S01L57085S	R	RAECHEL LOUISE	41592
33	HINDERER	RAECHEL	S01L57376O	R	ILLUSION	10567
34	HORN	DAVID	S01L55399O	R	ALYSA ANNE	31888
35	JOHNSON	PAUL	S01L56395S	NR	SUSAN RAE	35956
36	JONES	JOHN	S01L56589I	R	BEAR CLAW	34902
37	JONES	MORRIS	S01L56405W	NR	ISLANDER	39275
38	KALMAKOFF	HARVEY	S01L50090M	R	OCEAN SPRAY	23636
39	KALMAKOFF	ARCHIE	S01L55361H	R	DESERT STORM	38122
40	KALMAKOFF	JOSEPH	S01L60614G	R	SEA ROGUE	11017
41	KASHEVAROF	WILLIAM	S01L57487N	R	CHRISTINE K	54242
42	KOPUN	ALOYS	S01L57863I	R	KAREY GALE	45995
43	KOPUN	AXEL	S01L57612J	R	MISS MARIT	35863
44	KOSBRUK	IVAN	S01L50116R	R	JELLY ROLL	45720

-Continued-

Table 1. (page 2 of 2)

NAME		PERMIT NO.	RESIDENCY	VESSEL NAME	ADF&G NO.
45 KOSBRUK	HARRY	S01L56726L	R	SAINT HERMAN	38528
46 KOSBRUK	BORIS	S01L58206U	R	LADY EVELYN	43200
47 LIND	JOHNNY	S01L50223W	R	ALEUT SISTERS	38404
48 LIND	ELLIOT	S01L56872O	R	LISA MARIE	35950
49 LIND	MITCHELL	S01L57384C	R	JESSICA MARIE	111
50 MCKILLY	GABRIEL	S01L59493O	R	DOROTHY M	32863
51 ODOMIN	NICK	S01L57696L	R	ELLA MAE	195
52 OGLE	LEONARD	S01L55311R	R	CHALLENGE	61706
53 OLSEN	KNUD	S01L56418W	NR	HEIDE LINEA	55822
54 OLSEN	GARRETT	S01L58496R	NR	ABSOLUT	21877
55 OLSEN	JEFFREY	S01L60115F	NR	DENAKA	118
56 ORLOFF	GEORGE	S01L59308M	R	NAVIGATOR	32397
57 PEDERSEN	ALVIN	S01L55953V	R	MILLIE JO	37662
58 PEDERSEN	HANS	S01L57171K	R	SUSIE LYNN	40248
59 PEDERSEN	AUGUST	S01L58126H	R	SHARON ANN	59642
60 PEDERSEN	MARIUS	S01L64187U	R	KAISHA LENAE	57465
61 PEDERSEN	STANLEY	S01L62210Z	R	KAYLEE	5041
62 PLETNIKOFF	ROBERT	S01L58077F	R	RITA MARIE	35986
63 ROWLAND	ROGER	S01L63976A	R	DESIDERATA	41160
64 SHANGIN	CLEMENT	S01L56733H	R	MISS CLEMENTINE	38622
65 SHANGIN	EDGAR	S01L50123N	R	MISS ANGELINA	49655
66 SHANGIN	RUSSELL	S01L57003B	R	AMBER NICOLE	56291
67 SHANGIN	ANDY	S01L58145K	R	SHARON DAWN	39351
68 SHANGIN	DENNIS	S01L58178G	R	MIRANDA LEIGH	21899
69 SHANGIN	STEPHEN	S01L52949G	R	BAY VIEW	21554
70 SIEMION	THEODORE	S01L56322H	NR	OUTSIDER	20453
71 SIEMION	MATTHEW	S01L56992S	NR	SEA BREEZE	32361
72 SKONBERG	RALPH	S01L50205L	R	MICHELE LEE	35698
73 SKONBERG	ARNOLD	S01L55477R	R	LEANNA JEAN	45060
74 SKONBERG	DARRELL	S01L55546P	NR	ALASKA ROSE	33614
75 SKONBERG	CALVIN	S01L56228C	R	ROSALIE	34184
76 SKONBERG	ROY	S01L58470R	R	AMY RAE	42210
77 STEPANOFF	SAM	S01L50338P	R	SONIA FRANCINE	33778
78 STEPANOFF	WALTER	S01L57091W	R	MIRICLE GIRL	36629
79 STEPANOFF	OLEANA	S01L58308N	R	ERICA RAE	33957
80 STEPANOFF	ANDREW	S01L60144G	R	LAURA JUNE	28396
81 SUYDAM	LOWELL	S01L56680K	R	STELLOR	39962
82 SUYDAM	GLENN	S01L59615J	R	ALEUT SON	53205
83 TAKAK	AFONIE	S01L57035F	R	LADY LENA	6163
84 YAGIE	JERRY	S01L56797N	R	NORTHWIND	36296
85 YAGIE	MARVIN	S01L57278P	R	MAXINE	54909

Table 2. Alaska resident vs. non-resident ownership of permits in the Chignik Management Area, 1966-1998.

	Resident		Non-Resident		Total Permits
Year	Number	Percent	Number	Percent	Fished
1966	65	89.0	8	11.0	73
1967	73	88.0	10	12.0	83
1968	59	88.1	8	11.9	67
1969	57	83.8	11	16.2	68
1970	57	82.6	12	17.4	69
1971	64	83.1	13	16.9	77
1972	62	78.5	17	21.5	79
1973	63	81.8	14	18.2	77
1974	79	84.0	15	16.0	94
1975	72	83.7	14	16.3	86
1976	66	85.7	11	14.3	77
1977	74	84.1	14	15.9	88
1978	82	86.3	13	13.7	95
1979	87	86.1	14	13.9	101
1980	87	86.1	14	13.9	101
1981	87	84.5	16	15.5	103
1982	89	84.8	16	15.2	105
1983	84	84.0	16	16.0	100
1984	84	83.2	17	16.8	101
1985	85	84.2	16	15.8	101
1986	87	87.0	13	13.0	100
1987	89	87.3	13	12.7	102
1988	88	86.3	14	13.7	102
1989	86	84.3	16	15.7	102
1990	85	84.2	16	15.8	101
1991	85	83.0	18	17.0	103
1992	84	84.0	17	17.0	101
1993	85	83.3	17	16.7	102
1994	82	82.8	17	17.2	99
1995	80	80.0	20	20.0	100
1996	80	80.0	20	20.0	100
1997	81	82.7	17	17.3	98
1998	70	82.4	15	17.6	85

Table 3. Commercial salmon catches in the Chignik Management Area by district, statistical area, and species, 1998.

Districts	Statistical Area	Catch by Species in Number of Salmon[a]					
		Chinook	Sockeye	Coho	Pink	Chum	Total
Chignik Bay	27110	1,721	621,868	23,063	26,054	7,352	680,058
	Total	1,721	621,868	23,063	26,054	7,352	680,058
Central	27220	65	5,632	4,953	17,134	3,737	31,521
	27230	879	141,910	18,152	92,816	27,850	281,607
	27240	17	5,519	1,106	11,059	1,492	19,193
	27250	109	55,832	3,074	27,603	4,818	91,436
	27262	716	77,620	5,438	85,120	5,139	174,033
	Total	1,786	286,513	32,723	233,732	43,036	597,790
Eastern	27260	71	21,635	847	13,066	1,762	37,381
	27280	1	12	188	19	120	340
	27290	0	1,791	48	48,028	1,361	51,228
	27292	7	7,117	144	5,612	1,937	14,817
	Total	79	30,555	1,227	66,725	5,180	103,766
Western	27374	198	51898	38725	283579	29331	403731
	27380	14	11896	887	4053	1044	17894
	27390	114	22,861	10,132	38,408	7,391	78,906
	27394	229	1,285	5,615	17,147	3,659	27,935
	Total	555	87,940	55,359	343,187	41,425	528,466
Perryville	27540	143	21,856	15,669	92,768	28,702	159,138
	27750	111	5,440	1,471	14,522	3,146	24,690
	Total	254	27,296	17,140	107,290	31,848	183,828
All Districts Grand Total		4,395	1,054,172	129,512	776,988	128,841	2,093,908

[a]Does not include salmon caught for personal use or with subsistence permits.
Does not include salmon caught at Cape Igvak or Southeastern District Mainland fisheries.
Includes the department's test fishery and the Chignik Seiners's co-operative catches.

Table 4. Commercial salmon catch by day and effort in the Chignik Management Area, 1998.

Catch	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
DD/MM[a,b]	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
11-Jun [c]	1	1	0	0	2,583	13,230	0	0	0	0	0	0	2,583	13,230
12-Jun [c]	1	1	0	0	1,323	6,936	0	0	0	0	0	0	1,323	6,936
15-Jun [c]	1	1	0	0	2,158	11,031	0	0	0	0	0	0	2,158	11,031
18-Jun [d]	4	5	1	3	7,714	41,656	0	0	4	9	6	44	7,725	41,712
19-Jun [c]	1	1	0	0	1,947	10,578	0	0	0	0	0	0	1,947	10,578
23-Jun [c]	1	1	0	0	1,453	8,137	0	0	0	0	0	0	1,453	8,137
26-Jun [c]	1	1	21	450	2,910	16,128	0	0	0	0	0	0	2,931	16,578
29-Jun	77	77	115	2,307	25,969	149,700	3	19	812	2,227	590	4,260	27,489	158,513
30-Jun	75	76	131	2,390	20,808	118,054	12	77	2,889	7,983	827	6,251	24,667	134,755
1-Jul	68	68	198	3,684	13,124	74,836	1	8	302	806	402	3,126	14,027	82,460
2-Jul	55	56	97	1,693	13,674	79,424	9	72	1,004	2,913	772	5,043	15,556	89,145
3-Jul	70	74	139	2,280	17,487	105,016	49	316	854	2,310	6,395	45,129	24,924	155,051
4-Jul	66	69	89	1,418	16,155	95,839	147	999	1,873	5,387	9,512	68,033	27,776	171,676
5-Jul	68	71	133	2,424	13,249	78,970	93	590	1,031	2,862	799	5,752	15,305	90,598
6-Jul	71	74	215	4,354	20,434	124,865	185	1,184	1,877	5,471	1,172	8,461	23,883	144,335
7-Jul	72	73	160	2,507	20,442	124,564	218	1,483	2,478	6,357	1,243	9,148	24,541	144,059
8-Jul	75	78	124	2,193	21,066	133,273	153	1,062	1,909	5,176	943	6,779	24,195	148,483
9-Jul	72	74	102	1,567	24,223	157,455	214	1,479	3,030	8,595	1,261	8,335	28,830	177,431
10-Jul	77	80	128	1,988	33,324	213,977	432	3,101	5,423	14,911	1,310	9,819	40,617	243,796
11-Jul	72	84	94	1,490	30,613	195,444	395	2,805	6,741	20,147	1,111	8,236	38,954	228,122
12-Jul	6	6	0	0	1,151	7,259	3	28	28	91	3	26	1,185	7,404
13-Jul	76	77	190	2,739	37,442	235,302	4,269	31,434	18,759	53,770	2,226	16,141	62,886	339,386
14-Jul	77	81	196	3,132	41,533	264,744	5,763	39,896	16,035	47,754	2,536	18,121	66,063	373,647
15-Jul	71	74	63	1,136	39,752	257,798	1,576	11,303	6,057	21,209	1,167	8,942	48,615	300,388
16-Jul	74	91	95	1,328	62,509	401,265	3,771	27,501	23,753	71,430	4,147	29,205	94,275	530,729
17-Jul	26	26	77	568	5,106	32,585	134	980	1,324	4,428	83	703	6,724	39,264
18-Jul	73	73	101	1,646	38,181	246,660	745	5,501	10,193	31,026	1,033	7,594	50,253	292,427
19-Jul	74	80	85	1,237	50,391	325,430	1,002	7,195	7,545	25,086	1,318	9,835	60,341	368,783
20-Jul	71	76	36	741	40,548	257,003	662	5,000	7,498	26,877	859	6,316	49,603	295,937
21-Jul	76	77	36	575	47,425	302,054	2,696	20,314	17,836	54,783	2,283	15,612	70,276	393,338
22-Jul	70	74	74	1,020	31,021	192,518	2,826	21,474	21,316	63,083	2,621	18,014	57,858	296,109
23-Jul	75	80	76	1,007	28,871	178,833	7,685	52,393	24,448	86,143	6,090	40,479	67,170	358,855
25-Jul	77	79	37	562	32,123	195,094	436	3,158	16,789	59,469	1,178	9,171	50,563	267,454
26-Jul	72	74	59	999	34,259	211,354	2,227	16,637	43,547	150,488	3,497	25,099	83,589	404,577

-Continued-

Table 4. (page 2 of 3)

Catch DD/MM	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum		Total	
			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
27-Jul	69	77	129	1,438	32,913	201,618	3,947	30,046	57,442	193,879	4,279	31,469	98,710	458,450
28-Jul	9	9	1	31	3,530	21,731	17	139	335	1,278	31	224	3,914	23,403
29-Jul	19	19	3	23	5,331	31,548	28	217	727	2,658	45	335	6,134	34,781
30-Jul	61	75	121	1,363	17,723	105,332	2,648	18,965	52,787	169,995	2,591	18,619	75,870	314,274
31-Jul	65	65	82	906	19,171	115,256	4,202	30,738	62,350	208,613	3,642	26,064	89,447	381,577
1-Aug	63	65	130	1,413	13,494	79,493	1,907	15,324	19,469	74,785	1,479	10,996	36,479	182,011
3-Aug	67	70	59	664	13,391	78,240	3,522	27,061	41,013	138,911	3,026	21,260	61,011	266,136
4-Aug	68	68	72	974	10,912	63,507	3,053	24,107	39,354	129,980	3,271	23,712	56,662	242,280
5-Aug	53	55	69	709	6,024	34,018	3,878	26,399	25,427	103,013	3,267	22,500	38,665	186,639
6-Aug	47	48	36	434	6,433	39,578	3,586	27,657	35,824	139,119	3,749	27,282	49,628	234,070
7-Aug	30	30	17	173	3,020	16,217	1,016	8,151	10,009	28,362	1,022	7,394	15,084	60,297
9-Aug	11	11	8	84	798	4,491	313	2,421	2,131	7,290	249	1,921	3,499	16,207
10-Aug	55	55	101	1,373	9,761	57,184	4,507	35,265	40,232	122,837	5,716	40,808	60,317	257,467
11-Aug	50	52	134	1,773	8,962	50,997	5,924	46,059	35,816	117,826	6,326	47,529	57,162	264,184
12-Aug	46	47	128	1,627	9,710	56,694	6,590	51,687	38,872	128,959	6,849	48,813	62,149	287,780
13-Aug	42	44	167	2,233	10,643	62,715	3,947	31,885	31,295	106,540	6,257	45,037	52,309	248,410
14-Aug	30	30	16	289	4,663	24,999	1,090	9,493	3,639	13,281	1,616	11,758	11,024	59,820
16-Aug	36	36	34	426	5,502	30,071	1,608	13,288	4,031	14,123	2,087	15,309	13,262	73,217
17-Aug	40	42	16	237	5,683	31,000	3,186	25,158	9,515	32,601	3,371	23,321	21,771	112,317
18-Aug	47	48	41	510	6,803	37,615	2,100	16,609	4,463	13,910	2,027	14,477	15,434	83,121
19-Aug	31	31	35	535	5,360	28,975	2,057	17,202	4,068	10,807	1,860	12,294	13,380	69,813
20-Aug	44	45	46	722	10,012	56,163	3,388	30,146	5,412	19,414	2,989	20,980	21,847	127,425
21-Aug	23	23	4	51	1,118	6,223	350	3,119	316	1,212	240	1,673	2,028	12,278
23-Aug	35	35	14	250	8,515	46,041	1,617	14,676	1,436	5,171	974	6,903	12,556	73,041
24-Aug	31	31	38	515	5,160	27,239	2,222	19,920	1,467	5,024	934	6,656	9,821	59,354
25-Aug	30	30	3	51	5,962	32,549	1,779	16,443	1,181	4,222	688	4,691	9,613	57,956
26-Aug	31	32	3	42	4,081	22,117	1,484	14,137	730	2,653	669	4,724	6,967	43,673
27-Aug	28	29	4	74	6,765	37,121	3,001	27,661	1,213	4,668	1,347	8,647	12,330	78,171
29-Aug	30	31	2	34	5,779	30,839	2,456	23,524	300	1,247	612	4,003	9,149	59,647
30-Aug	26	27	4	58	4,202	25,986	2,989	28,409	416	1,563	575	3,903	8,186	59,919
31-Aug	30	32	0	0	3,303	17,499	2,163	21,473	86	325	417	2,702	5,969	41,999
1-Sep	2	2	0	0	1,055	5,538	370	3,535	60	224	232	1,471	1,717	10,768
2-Sep	19	19	1	4	2,625	14,167	1,070	10,682	26	98	123	748	3,845	25,699
3-Sep	25	26	0	0	6,305	33,385	2,747	27,009	134	466	549	3,455	9,735	64,315
4-Sep	20	20	2	41	2,218	11,959	1,328	13,237	35	120	204	1,323	3,787	26,680

-Continued-

Table 4. (page 3 of 3)

Catch			Chinook		Sockeye		Coho		Pink		Chum		Total	
DD/MM	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
6-Sep	18	19	0	0	2,933	15,616	4,050	41,298	4	8	56	425	7,043	57,347
7-Sep	17	17	0	0	1,778	9,201	2,034	20,252	16	48	75	463	3,903	29,964
10-Sep	11	11	0	0	762	4,084	1,017	10,185	2	5	10	67	1,791	14,341
14-Sep	5	5	0	0	376	2,028	436	4,383	0	0	3	18	815	6,429
15-Sep	4	4	3	35	428	2,004	179	1,854	0	0	0	0	610	3,893
Total	85	3,348	4,395	66,530	1,054,172	6,438,050	129,512	1,045,823	776,988	2,586,026	128,841	917,648	2,093,908	11,054,077
Average Weight				15.1		6.1		8.1		3.3		7.1		

[a]Does not include salmon caught for personal use or for subsistence.

[b]Does not include salmon caught at Cape Igvak or Southeastern District Mainland.

[c]Catch from the department's test fishery within Chignik Lagoon.

[d]Catch from the Chignik Seiners's Association Co-operative catches.

Table 5. Commercial fishing effort and catch by statistical area and day in the Chignik Management Area, 1998.

Stat Area	Catch Date[a,b,c]	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total Salmon	
		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
27110	11-Jun [d]	1	1	0	0	2,583	13,230	0	0	0	0	0	0	2,583	13,230
	12-Jun [d]	1	1	0	0	1,323	6,936	0	0	0	0	0	0	1,323	6,936
	15-Jun [d]	1	1	0	0	2,158	11,031	0	0	0	0	0	0	2,158	11,031
	18-Jun [e]	4	5	1	3	7,714	41,656	0	0	4	9	6	44	7,725	41,712
	19-Jun [d]	1	1	0	0	1,947	10,578	0	0	0	0	0	0	1,947	10,578
	23-Jun [d]	1	1	0	0	1,453	8,137	0	0	0	0	0	0	1,453	8,137
	26-Jun [d]	1	1	21	450	2,910	16,128	0	0	0	0	0	0	2,931	16,578
	29-Jun	51	51	90	1,917	20,747	119,219	0	0	11	36	31	225	20,879	121,397
	30-Jun	50	51	113	2,127	15,484	87,776	4	24	410	1,042	110	755	16,121	91,724
	1-Jul	48	48	175	3,392	9,786	55,183	0	0	67	160	25	214	10,053	58,949
	2-Jul	39	40	87	1,534	9,805	56,533	4	32	24	76	11	75	9,931	58,250
	3-Jul	48	51	99	1,841	10,333	61,977	0	0	14	42	8	62	10,454	63,922
	4-Jul	40	40	54	889	6,210	36,923	0	0	25	65	31	222	6,320	38,099
	5-Jul	42	44	109	2,009	8,162	48,432	0	0	18	56	14	104	8,303	50,601
	6-Jul	42	45	193	4,019	12,688	77,885	6	34	19	54	14	95	12,920	82,087
	7-Jul	42	43	81	1,357	8,449	52,297	0	0	21	61	14	107	8,565	53,822
	8-Jul	45	48	70	1,410	11,385	71,913	1	8	16	47	11	79	11,483	73,457
	9-Jul	43	44	58	946	13,005	85,511	2	15	24	71	25	181	13,114	86,724
	10-Jul	48	51	80	1,388	22,078	143,518	26	182	119	348	49	414	22,352	145,850
	11-Jul	45	56	66	1,134	19,633	126,863	2	16	73	230	45	357	19,819	128,600
	12-Jul			0	0	621	3,895	0	0	3	9	1	9	625	3,913
	13-Jul	47	48	41	679	22,785	144,908	10	84	121	391	33	228	22,990	146,290
	14-Jul	45	48	62	1,138	21,394	138,539	18	131	142	452	25	178	21,641	140,438
	15-Jul	44	46	26	537	25,156	162,243	22	164	174	604	27	224	25,405	163,772
	16-Jul	47	60	44	672	30,783	198,657	50	404	346	1,208	116	879	31,339	201,820
	17-Jul	19	19	4	77	2,745	17,373	1	8	13	42	4	34	2,767	17,534
	18-Jul	50	50	27	509	22,812	145,934	0	0	248	823	45	369	23,132	147,635
	19-Jul	47	52	23	402	29,726	189,847	2	18	207	644	44	367	30,002	191,278
	20-Jul	48	52	23	425	25,421	157,844	2	18	238	805	62	502	25,746	159,594
	21-Jul	46	47	13	227	20,734	126,429	0	0	216	758	83	641	21,046	128,055
	22-Jul	45	49	19	244	19,994	121,688	55	495	434	1,586	85	656	20,587	124,669
	23-Jul	44	46	9	120	14,606	88,958	6	47	268	931	86	700	14,975	90,756
	25-Jul	51	53	18	276	23,992	144,500	7	50	630	2,446	338	2,719	24,985	149,991
	26-Jul	45	47	28	495	18,724	113,306	9	71	625	2,537	193	1,501	19,579	117,910
	27-Jul	39	46	8	136	17,748	108,276	14	104	682	2,759	198	1,603	18,650	112,878

-Continued-

Table 5. (page 2 of 12)

Stat Area	Catch Date[a,b,c]	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total Salmon	
		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
27110	28-Jul	8	8	1	31	3,203	19,797	1	8	89	361	22	158	3,316	20,355
	29-Jul	18	18	2	6	5,256	31,060	9	73	304	1,175	41	307	5,612	32,621
	30-Jul	38	48	4	47	12,044	69,363	43	339	1,337	5,396	282	2,296	13,710	77,441
	31-Jul	35	35	8	124	10,145	58,056	148	1,309	1,430	5,641	315	2,507	12,046	67,637
	1-Aug	38	39	2	35	9,142	53,270	118	918	1,573	6,460	211	1,591	11,046	62,274
	3-Aug	38	40	5	35	9,470	54,767	15	118	2,254	9,181	410	3,277	12,154	67,378
	4-Aug	42	42	11	188	7,499	43,118	98	860	2,549	10,411	328	2,592	10,485	57,169
	5-Aug	29	31	2	30	3,872	21,540	14	137	1,276	5,260	192	1,479	5,356	28,446
	6-Aug	24	24	5	52	2,008	10,990	45	370	685	2,750	199	1,546	2,942	15,708
	7-Aug	21	21	4	30	2,350	12,520	9	77	708	2,841	177	1,424	3,248	16,892
	9-Aug	5	5	0	0	459	2,552	14	137	175	695	4	33	652	3,417
	10-Aug	31	31	4	39	4,835	26,252	118	928	1,729	6,895	324	2,474	7,010	36,588
	11-Aug	22	23	6	81	3,805	20,502	101	807	1,461	5,793	287	2,238	5,660	29,421
	12-Aug	18	18	2	34	2,845	15,222	14	113	905	3,654	101	817	3,867	19,840
	13-Aug	18	18	8	82	2,313	12,555	65	498	826	2,906	195	1,389	3,407	17,430
	14-Aug	14	14	2	48	2,241	12,046	99	845	487	1,809	232	1,718	3,061	16,466
	16-Aug	18	18	1	11	3,238	16,944	54	420	282	1,106	113	840	3,688	19,321
	17-Aug	18	20	0	0	2,147	11,489	83	615	324	1,237	116	855	2,670	14,196
	18-Aug	24	25	0	0	3,574	19,312	236	1,880	433	1,672	156	1,102	4,399	23,966
	19-Aug	20	20	1	7	3,658	19,599	252	2,135	395	1,390	133	932	4,439	24,063
	20-Aug	23	23	4	68	3,633	19,157	419	3,668	445	1,726	400	2,809	4,901	27,428
	21-Aug	13	13	1	10	702	3,822	117	1,042	72	279	70	507	962	5,660
	23-Aug	21	21	0	0	4,815	25,138	371	3,410	347	1,259	153	1,042	5,686	30,849
	24-Aug	19	19	2	36	2,205	11,515	546	4,733	134	500	117	775	3,004	17,559
	25-Aug	19	19	0	0	3,729	20,259	939	8,665	164	610	128	831	4,960	30,365
	26-Aug	17	17	1	20	1,968	10,329	825	7,876	72	259	55	388	2,921	18,872
	27-Aug	18	19	0	0	3,917	20,959	1,022	9,558	151	573	219	1,414	5,309	32,504
	29-Aug	23	24	1	8	4,039	21,364	1,912	18,472	99	339	164	1,104	6,215	41,287
	30-Aug	18	19	1	18	2,032	10,933	2,023	19,918	51	170	88	591	4,195	31,630
	31-Aug	23	25	0	0	2,053	10,937	1,717	17,226	10	35	90	580	3,870	28,778
	1-Sep			0	0	54	290	8	76	0	0	4	24	66	390
	2-Sep	16	16	1	4	2,137	11,428	908	9,089	26	98	42	248	3,114	20,867
	3-Sep	19	19	0	0	3,616	19,273	1,845	18,383	36	94	63	412	5,560	38,162
	4-Sep	17	17	0	0	1,826	9,859	1,069	10,530	15	51	70	459	2,980	20,899
	6-Sep	17	18	0	0	2,821	15,015	3,959	40,500	0	0	29	202	6,809	55,717

-Continued-

Table 5. (page 3 of 12)

Stat Area	Catch Date[a,b,c]	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total Salmon	
		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
27110	7-Sep	16	16	0	0	1,763	9,120	2,028	20,192	16	48	75	463	3,882	29,823
	10-Sep	11	11	0	0	762	4,084	1,017	10,185	2	5	10	67	1,791	14,341
	14-Sep	5	5	0	0	376	2,028	436	4,383	0	0	3	18	815	6,429
	15-Sep			0	0	222	1,082	125	1,270	0	0	0	0	347	2,352
27110	**TOTAL**	67	2090	1,721	31,397	621,868	3,751,669	23,063	223,668	26,054	100,971	7,352	55,053	680,058	4,162,758
	AVG.WT.				18.2		6.0		9.7		3.9		7.5		
27220	30-Jun			0	0	348	1,787	1	7	547	1,349	154	1,210	1,050	4,353
	3-Jul	3	3	23	175	418	2,490	20	128	315	754	316	2,272	1,092	5,819
	4-Jul			1	10	620	3,809	46	315	575	1,635	320	2,001	1,562	7,770
	5-Jul			0	0	54	300	5	30	26	80	48	180	133	590
	8-Jul			0	0	529	2,996	12	72	32	102	50	247	623	3,417
	27-Jul			0	0	209	1,227	3	46	16	48	0	0	228	1,321
	1-Aug	3	3	29	312	131	707	673	5,010	2,677	9,562	288	2,127	3,798	17,718
	3-Aug			0	0	152	874	59	471	307	1,195	48	335	566	2,875
	5-Aug			0	0	19	115	0	0	210	845	267	2,150	496	3,110
	7-Aug	3	3	1	12	287	1,585	742	5,722	7,697	19,250	522	3,401	9,249	29,970
	11-Aug			0	0	101	517	225	1,967	499	1,909	65	451	890	4,844
	12-Aug			0	0	118	585	305	2,619	965	3,689	301	2,160	1,689	9,053
	13-Aug			6	100	363	2,470	371	2,673	935	3,649	237	1,663	1,912	10,555
	14-Aug	3	3	3	63	252	1,331	360	3,383	845	3,348	407	3,039	1,867	11,164
	16-Aug			0	0	6	40	34	310	77	285	38	290	155	925
	21-Aug			0	0	40	271	140	1,226	50	203	25	156	255	1,856
	24-Aug			0	0	804	4,190	702	6,481	465	1,717	227	1,509	2,198	13,897
	25-Aug			0	0	406	2,167	268	2,460	368	1,344	55	380	1,097	6,351
	27-Aug			2	28	775	5,239	987	8,822	528	2,094	369	2,427	2,661	18,610
27220	**TOTAL**	19	31	65	700	5,632	32,700	4,953	41,742	17,134	53,058	3,737	25,998	31,521	154,198
	AVG.WT.				10.8		5.8		8.4		3.1		7.0		
27230	29-Jun	10	10	15	207	1,893	11,164	0	0	37	98	230	1,800	2,175	13,269
	30-Jun	14	14	16	219	2,235	12,914	5	32	297	818	311	2,461	2,864	16,444
	1-Jul	10	10	6	79	1,529	9,059	0	0	24	73	152	1,126	1,711	10,337
	2-Jul	15	15	10	159	3,789	22,448	5	40	963	2,786	750	4,891	5,517	30,324
	3-Jul	9	9	9	153	2,269	13,989	13	91	92	229	604	4,566	2,987	19,028
	4-Jul	11	11	12	203	2,524	15,262	8	63	341	1,042	480	3,721	3,365	20,291

-Continued-

Table 5. (page 4 of 12)

Stat Area	Catch Date[a,b,c]	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total Salmon	
		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
27230	5-Jul	10	10	5	141	1,304	8,184	8	59	25	73	204	1,765	1,546	10,222
	6-Jul	11	11	13	185	2,043	12,594	23	148	186	519	441	3,546	2,706	16,992
	7-Jul	14	14	31	449	3,026	19,122	37	245	146	425	604	4,719	3,844	24,960
	8-Jul	14	14	28	377	3,616	23,771	38	281	167	450	323	2,406	4,172	27,285
	9-Jul	11	11	31	463	2,804	18,058	14	96	220	668	320	2,007	3,389	21,292
	10-Jul	8	8	12	145	1,573	10,056	26	177	175	566	154	1,191	1,940	12,135
	11-Jul	12	13	11	157	2,971	18,907	107	673	1,557	4,322	321	2,395	4,967	26,454
	13-Jul	6	6	13	168	1,302	8,167	15	110	194	697	69	553	1,593	9,695
	14-Jul	5	5	11	173	2,812	18,492	44	294	296	1,056	162	1,176	3,325	21,191
	15-Jul	6	6	3	40	2,230	14,508	11	88	411	1,695	80	590	2,735	16,921
	16-Jul	8	10	6	44	5,678	35,778	93	590	1,517	5,079	508	3,046	7,802	44,537
	17-Jul			0	0	27	177	2	16	4	16	3	28	36	237
	18-Jul	8	8	25	336	6,084	40,044	164	1,125	1,318	4,630	286	2,226	7,877	48,361
	19-Jul	14	14	11	204	8,908	57,377	165	1,215	2,513	7,707	864	6,441	12,461	72,944
	20-Jul	9	9	2	33	3,210	20,344	54	458	756	2,688	189	1,541	4,211	25,064
	21-Jul	7	7	3	42	3,706	25,835	155	987	823	3,108	213	1,320	4,900	31,292
	22-Jul	9	9	16	265	2,618	17,220	232	1,691	864	3,048	359	2,940	4,089	25,164
	23-Jul	11	11	1	4	2,754	17,666	243	1,798	674	2,637	311	2,623	3,983	24,728
	25-Jul	16	16	6	85	5,550	33,931	239	1,720	6,414	22,776	606	4,686	12,815	63,198
	26-Jul	7	7	6	86	6,254	38,442	140	1,017	4,982	17,417	431	2,979	11,813	59,941
	27-Jul	11	11	76	726	6,034	37,492	246	1,790	4,809	17,065	216	1,630	11,381	58,703
	28-Jul	1	1	0	0	327	1,934	16	131	246	917	9	66	598	3,048
	30-Jul	10	11	57	495	2,077	12,425	114	879	2,173	8,402	245	1,963	4,666	24,164
	31-Jul	10	10	23	280	2,131	12,539	273	2,313	2,582	8,942	410	3,046	5,419	27,120
	1-Aug	17	18	74	856	3,241	19,375	739	6,417	11,170	43,788	757	5,592	15,981	76,028
	3-Aug	11	11	42	471	2,208	13,332	366	2,662	5,688	19,662	587	4,308	8,891	40,435
	4-Aug	13	13	3	25	1,369	7,714	227	1,855	3,822	14,957	490	3,952	5,911	28,503
	5-Aug	9	9	4	74	712	3,982	319	2,890	2,855	11,050	414	3,104	4,304	21,100
	6-Aug	8	8	6	60	1,074	6,298	556	4,442	3,342	11,996	620	4,776	5,598	27,572
	7-Aug	5	5	11	120	333	1,839	239	2,141	1,178	4,681	305	2,436	2,066	11,217
	9-Aug	4	4	4	52	175	952	260	2,089	968	3,629	196	1,498	1,603	8,220
	10-Aug	5	5	51	692	1,882	11,408	660	5,147	4,799	16,633	1,272	9,434	8,664	43,314
	11-Aug	7	7	46	618	2,406	13,690	617	4,876	4,746	18,270	1,356	11,665	9,171	49,119
	12-Aug	8	8	11	173	2,166	12,840	464	3,650	4,437	15,623	1,529	10,963	8,607	43,249
	13-Aug	11	11	75	999	1,877	11,383	815	6,496	3,527	12,715	1,400	10,107	7,694	41,700

-Continued-

Table 5. (page 5 of 12)

Stat Area	Catch Date[a,b,c]	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total Salmon	
		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
27230	14-Aug	10	10	9	143	1,522	8,000	518	4,405	1,504	5,400	868	6,190	4,421	24,138
	16-Aug	8	8	1	11	1,929	11,182	408	3,372	1,128	3,942	744	5,319	4,210	23,826
	17-Aug	6	6	3	62	1,149	6,468	313	2,621	1,026	3,599	534	3,908	3,025	16,658
	18-Aug	12	12	5	47	1,633	9,250	687	5,436	1,222	4,189	787	5,560	4,334	24,482
	19-Aug	4	4	0	0	396	2,399	142	989	307	983	150	1,056	995	5,427
	20-Aug	13	14	18	245	3,844	21,286	988	8,775	2,124	7,519	1,073	7,609	8,047	45,434
	21-Aug	6	6	0	0	249	1,491	49	470	121	463	100	700	519	3,124
	23-Aug	11	11	12	199	3,329	18,293	1,083	9,842	889	3,112	711	5,121	6,024	36,567
	24-Aug	9	9	35	469	2,005	10,523	896	8,061	798	2,534	563	4,210	4,297	25,797
	25-Aug	8	8	0	0	1,631	8,915	479	4,460	541	1,858	434	2,968	3,085	18,201
	26-Aug	14	15	2	22	2,113	11,788	659	6,261	658	2,394	614	4,336	4,046	24,801
	27-Aug	7	7	1	24	1,782	9,583	855	8,052	428	1,580	565	3,576	3,631	22,815
	29-Aug	7	7	1	26	1,740	9,475	544	5,052	201	908	448	2,899	2,934	18,360
	30-Aug	8	8	3	40	2,170	15,053	966	8,491	365	1,393	487	3,312	3,991	28,289
	31-Aug	7	7	0	0	1,250	6,562	446	4,247	76	290	327	2,122	2,099	13,221
	1-Sep			0	0	1,001	5,248	362	3,459	60	224	228	1,447	1,651	10,378
	2-Sep	3	3	0	0	488	2,739	162	1,593	0	0	81	500	731	4,832
	3-Sep	4	5	0	0	2,245	11,858	621	6,028	25	107	314	1,942	3,205	19,935
	4-Sep			1	21	380	1,960	71	685	1	3	14	88	467	2,757
	6-Sep			0	0	112	601	91	798	4	8	27	223	234	1,630
	7-Sep			0	0	15	81	6	60	0	0	0	0	21	141
	15-Sep			3	35	206	922	54	584	0	0	0	0	263	1,541
27230	**TOTAL**	40	538	879	11,402	141,910	864,389	18,152	154,533	92,816	333,459	27,850	204,369	281,607	1,568,152
	AVG.WT.				13.0		6.1		8.5		3.6		7.3		
27240	30-Jun			1	20	637	3,538	0	0	1,424	4,226	118	879	2,180	8,663
	6-Jul			0	0	388	2,331	56	350	683	1,641	120	896	1,247	5,218
	7-Jul			0	0	340	2,045	28	153	1,050	2,297	100	665	1,518	5,160
	10-Jul	4	4	6	48	1,706	10,178	141	1,029	1,349	3,732	344	2,698	3,546	17,685
	11-Jul			0	0	743	4,850	70	461	853	3,074	92	701	1,758	9,086
	16-Jul			0	0	18	107	2	14	40	114	1	8	61	243
	18-Jul			0	0	1,180	7,450	237	1,891	4,692	11,740	431	2,915	6,540	23,996
	1-Aug			10	100	63	299	291	2,318	895	3,353	114	819	1,373	6,889
	3-Sep			0	0	444	2,254	281	2,598	73	265	172	1,101	970	6,218
27240	**TOTAL**	9	15	17	168	5,519	33,052	1,106	8,814	11,059	30,442	1,492	10,682	19,193	83,158
	AVG.WT.				9.9		6.0		8.0		2.8		7.2		

-Continued-

Table 5. (page 6 of 12)

Stat Area	Catch Date[a,b,c]	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total Salmon	
		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
27250	29-Jun	6	6	1	16	1,408	8,323	3	19	476	1,249	140	1,006	2,028	10,613
	30-Jun	6	6	1	24	1,697	9,731	2	14	179	454	115	793	1,994	11,016
	1-Jul	7	7	4	43	1,274	7,475	1	8	138	346	157	1,261	1,574	9,133
	2-Jul			0	0	80	443	0	0	17	51	11	77	108	571
	3-Jul	6	6	2	25	3,256	19,396	14	82	337	961	395	2,719	4,004	23,183
	4-Jul	6	6	8	94	4,577	26,600	59	401	444	1,211	712	5,570	5,800	33,876
	5-Jul	8	8	8	97	1,221	7,752	60	383	367	984	326	2,411	1,982	11,627
	6-Jul	9	9	3	49	2,129	13,297	65	412	303	864	181	1,436	2,681	16,058
	7-Jul	4	4	6	78	956	5,989	31	220	103	303	73	534	1,169	7,124
	8-Jul	4	4	6	91	1,035	6,694	21	153	92	326	90	717	1,244	7,981
	9-Jul	7	7	1	6	2,374	14,983	64	441	215	629	150	1,163	2,804	17,222
	10-Jul	5	5	3	46	1,103	7,418	55	416	204	642	78	554	1,443	9,076
	11-Jul			0	0	266	1,561	15	112	33	112	33	246	347	2,031
	13-Jul	3	3	34	348	1,285	8,087	38	289	333	1,046	86	637	1,776	10,407
	14-Jul	3	3	10	135	1,426	9,193	77	464	354	959	95	824	1,962	11,575
	15-Jul	4	4	5	70	1,817	11,470	48	374	621	2,132	113	888	2,604	14,934
	16-Jul			9	138	5,181	33,234	360	2,762	1,770	6,192	317	2,586	7,637	44,912
	17-Jul			0	0	425	2,821	30	233	174	650	30	281	659	3,985
	18-Jul	4	4	3	88	3,048	19,773	145	1,092	707	2,570	124	996	4,027	24,519
	19-Jul	4	5	0	0	5,017	33,544	368	2,788	1,808	6,242	271	1,996	7,464	44,570
	20-Jul	5	5	0	0	4,787	32,635	324	2,360	2,802	10,458	270	1,948	8,183	47,401
	21-Jul	4	4	1	10	3,346	22,356	461	3,585	2,989	10,808	293	2,176	7,090	38,935
	22-Jul	3	3	1	18	2,052	14,450	148	1,175	2,306	8,072	88	707	4,595	24,422
	23-Jul	4	4	2	42	2,277	15,926	220	1,669	2,478	8,799	290	2,189	5,267	28,625
	25-Jul	4	4	0	0	1,236	7,935	156	1,150	2,670	9,654	129	968	4,191	19,707
	26-Jul			0	0	800	5,053	45	279	2,020	6,084	60	417	2,925	11,833
	27-Jul			1	15	1,218	7,632	203	1,236	2,764	9,192	109	710	4,295	18,785
	1-Aug	3	3	0	0	450	2,801	43	332	861	3,592	56	441	1,410	7,166
	25-Aug			0	0	91	465	18	160	38	134	26	187	173	946
27250	**TOTAL**	12	122	109	1,433	55,832	357,037	3,074	22,609	27,603	94,716	4,818	36,438	91,436	512,233
	AVG.WT.				13.1		6.4		7.4		3.4		7.6		
27260	30-Jun			0	0	327	1,953	0	0	30	88	19	153	376	2,194
	3-Jul	3	3	5	76	1,133	6,738	2	15	74	273	74	519	1,288	7,621
	4-Jul	4	4	5	88	1,975	11,852	0	0	316	1,005	98	688	2,394	13,633

-Continued-

Table 5. (page 7 of 12)

Stat Area	Catch Date[a,b,c]	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total Salmon	
		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
27260	5-Jul	4	4	2	21	1,132	5,759	9	45	303	947	132	775	1,578	7,547
	6-Jul	4	4	0	0	2,040	11,645	16	90	428	1,563	355	2,006	2,839	15,304
	7-Jul	3	3	12	161	2,878	16,432	42	310	499	1,194	122	857	3,553	18,954
	8-Jul	4	4	0	0	1,476	9,457	40	254	455	1,063	72	484	2,043	11,258
	9-Jul	5	6	6	102	2,530	16,725	63	430	1,290	3,410	124	876	4,013	21,543
	10-Jul	5	5	14	219	2,937	18,598	87	557	1,218	3,250	156	1,146	4,412	23,770
	11-Jul	4	4	6	80	2,846	17,586	77	596	1,451	5,609	96	690	4,476	24,561
	12-Jul			0	0	59	368	3	28	17	58	2	17	81	471
	27-Jul			11	181	1,262	8,025	11	100	6,466	16,166	91	594	7,841	25,066
	21-Aug	3	3	3	41	127	639	44	381	73	267	45	310	292	1,638
	23-Aug	3	3	2	51	371	2,610	163	1,424	200	800	110	740	846	5,625
	24-Aug			1	10	146	1,011	78	645	70	273	27	162	322	2,101
	25-Aug			3	51	105	743	75	698	70	276	45	325	298	2,093
	27-Aug			1	22	291	1,340	137	1,229	106	421	194	1,230	729	4,242
27260	**TOTAL**	9	52	71	1,103	21,635	131,481	847	6,802	13,066	36,663	1,762	11,572	37,381	187,621
	AVG.WT.				15.5		6.1		8.0		2.8		6.6		
27262	29-Jun	9	9	9	167	1,564	9,203	0	0	113	321	51	383	1,737	10,074
	30-Jun			0	0	80	355	0	0	2	6	0	0	82	361
	1-Jul	3	3	13	170	535	3,119	0	0	73	227	68	525	689	4,041
	4-Jul			9	134	249	1,393	34	220	172	429	111	889	575	3,065
	5-Jul	3	4	9	156	1,376	8,543	11	73	292	722	75	517	1,763	10,011
	6-Jul	4	4	6	101	1,146	7,113	19	150	258	830	61	482	1,490	8,676
	7-Jul	3	3	30	462	3,011	18,796	42	327	403	1,243	99	790	3,585	21,618
	8-Jul	3	3	19	301	1,304	8,362	26	184	243	853	65	482	1,657	10,182
	9-Jul	3	3	6	50	1,950	13,433	35	275	381	1,141	81	628	2,453	15,527
	10-Jul	4	4	13	142	2,428	15,662	58	448	915	2,763	73	579	3,487	19,594
	11-Jul	4	4	5	35	2,174	14,385	70	527	584	1,757	74	595	2,907	17,299
	12-Jul	3	3	0	0	471	2,996	0	0	8	24	0	0	479	3,020
	13-Jul	6	6	57	879	3,017	18,983	88	611	3,535	11,337	432	3,206	7,129	35,016
	14-Jul	8	8	44	783	5,573	35,446	190	1,474	1,265	4,025	108	826	7,180	42,554
	15-Jul	7	7	15	233	3,197	20,429	57	367	1,574	5,400	86	607	4,929	27,036
	16-Jul	5	5	22	247	7,467	48,120	314	2,197	2,490	8,703	178	1,282	10,471	60,549
	17-Jul	4	4	73	491	1,909	12,214	101	723	1,133	3,720	46	360	3,262	17,508
	18-Jul	9	9	46	713	5,057	33,459	199	1,393	3,228	11,263	147	1,088	8,677	47,916

-Continued-

Table 5. (page 8 of 12)

Stat Area	Catch Date[a,b,c]	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total Salmon	
		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
	19-Jul	9	9	51	631	6,740	44,662	467	3,174	3,017	10,493	139	1,031	10,414	59,991
	20-Jul	7	8	11	283	4,688	30,294	95	685	2,621	10,155	99	720	7,514	42,137
	21-Jul	8	8	11	176	4,978	34,826	68	523	4,477	16,507	125	909	9,659	52,941
	22-Jul	8	8	33	424	5,051	32,351	152	1,072	6,158	21,484	162	1,163	11,556	56,494
	23-Jul	7	7	28	289	2,472	15,190	132	953	2,528	9,224	138	1,103	5,298	26,759
	25-Jul	6	6	13	201	1,345	8,728	34	238	7,075	24,593	105	798	8,572	34,558
	29-Jul			1	17	75	488	19	144	423	1,483	4	28	522	2,160
	30-Jul			33	423	615	4,009	113	793	6,253	21,958	68	567	7,082	27,750
	31-Jul			14	119	464	3,023	100	721	3,025	10,634	94	768	3,697	15,265
	1-Aug			15	110	467	3,041	43	329	2,293	8,030	53	426	2,871	11,936
	3-Aug			3	51	343	2,237	76	543	3,010	9,381	67	476	3,499	12,688
	4-Aug			15	228	851	5,266	114	804	6,168	19,627	170	1,427	7,318	27,352
	5-Aug			1	10	278	1,672	117	823	3,490	11,263	116	940	4,002	14,708
	6-Aug			6	74	402	2,418	211	1,474	3,567	11,667	170	1,560	4,356	17,193
	7-Aug			1	11	50	273	26	211	426	1,590	18	133	521	2,218
	9-Aug			4	32	164	987	39	195	988	2,966	49	390	1,244	4,570
	10-Aug			10	207	770	5,307	417	3,328	3,082	9,312	354	2,760	4,633	20,914
	11-Aug			6	47	829	4,976	275	2,208	1,935	5,600	217	1,739	3,262	14,570
	12-Aug	3	3	18	182	725	4,357	545	2,429	2,455	5,624	238	1,917	3,981	14,509
	13-Aug	3	3	33	338	1,313	7,469	220	1,661	2,902	8,720	395	3,162	4,863	21,350
	14-Aug	3	3	2	35	648	3,622	113	860	803	2,724	109	811	1,675	8,052
	17-Aug			4	32	280	1,582	179	1,372	255	780	70	540	788	4,306
	18-Aug	3	3	16	179	755	4,463	308	2,282	634	1,939	199	1,570	1,912	10,433
	19-Aug			0	0	174	912	11	100	170	439	27	217	382	1,668
	20-Aug	3	3	11	175	635	3,388	320	2,788	696	1,848	198	1,433	1,860	9,632
27262	**TOTAL**	18	168	716	9,338	77,620	497,552	5,438	38,679	85,120	282,805	5,139	39,827	174,033	868,201
	AVG.WT.				13.0		6.4		7.1		3.3		7.7		
27280	4-Sep			1	20	12	140	188	2,022	19	66	120	776	340	3,024
27280	**TOTAL**			1	20	12	140	188	2,022	19	66	120	776	340	3,024
	AVG.WT.				20.0		11.7		10.8		3.5		6.5		

-Continued-

Table 5. (page 9 of 12)

Stat Area	Catch Date[a,b,c]	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total Salmon	
		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
27290	7-Jul	5	5	0	0	1,782	9,883	38	228	256	834	231	1,476	2,307	12,421
	26-Jul			0	0	0	0	0	0	21,824	74,977	41	313	21,865	75,290
	27-Jul			0	0	9	45	10	78	25,948	81,641	1,089	7,195	27,056	88,959
27290	**TOTAL**	6	9	0	0	1,791	9,928	48	306	48,028	157,452	1,361	8,984	51,228	176,670
	AVG.WT.				0.0		5.5		6.4		3.3		6.6		
27292	29-Jun			0	0	357	1,791	0	0	175	523	138	846	670	3,160
	8-Jul	3	3	1	14	1,721	10,080	15	110	904	2,335	332	2,364	2,973	14,903
	9-Jul	3	3	0	0	1,560	8,745	36	222	900	2,676	561	3,480	3,057	15,123
	10-Jul	3	3	0	0	1,499	8,547	39	292	1,443	3,610	456	3,237	3,437	15,686
	11-Jul	3	3	6	84	1,980	11,292	54	420	2,190	5,043	450	3,252	4,680	20,091
27292	**TOTAL**	3	13	7	98	7,117	40,455	144	1,044	5,612	14,187	1,937	13,179	14,817	68,963
	AVG.WT.				14.0		5.7		7.3		2.5		6.8		
27374	13-Jul	6	6	19	163	4,164	25,512	2,471	18,311	10,653	25,976	1,112	7,761	18,419	77,723
	14-Jul	6	6	36	478	2,326	13,497	3,839	25,588	9,036	21,462	1,251	8,588	16,488	69,613
	15-Jul	4	5	7	86	3,563	24,283	1,109	7,872	1,480	5,316	473	3,784	6,632	41,341
	16-Jul	5	5	7	98	4,086	24,792	2,283	16,930	15,555	43,007	2,135	15,212	24,066	100,039
	21-Jul	5	5	1	16	10,313	64,491	937	7,406	6,500	16,256	855	5,724	18,606	93,893
	22-Jul	5	5	5	69	1,306	6,809	2,239	17,041	11,554	28,893	1,927	12,548	17,031	65,360
	23-Jul	4	4	10	136	2,076	11,691	1,797	13,679	11,169	28,249	2,911	18,933	17,963	72,688
	26-Jul	7	7	6	53	5,986	37,597	1,658	12,631	9,917	32,039	2,053	15,236	19,620	97,556
	27-Jul	9	9	15	137	5,858	35,391	2,981	22,937	14,367	57,280	2,300	17,574	25,521	133,319
	30-Jul	7	7	15	213	1,376	8,407	1,990	14,292	37,174	110,196	1,513	10,213	42,068	143,321
	31-Jul	10	10	32	311	2,164	13,826	2,264	16,998	43,721	136,730	1,697	12,132	49,878	179,997
	3-Aug	7	7	2	29	631	3,398	1,946	15,579	21,181	58,451	878	5,826	24,638	83,283
	4-Aug	4	4	6	92	231	1,225	1,107	8,864	13,355	36,072	711	4,628	15,410	50,881
	5-Aug	5	5	0	0	381	2,340	2,129	13,732	8,806	44,031	1,275	8,345	12,591	68,448
	6-Aug	7	7	0	0	555	3,395	1,782	12,618	15,199	61,440	1,163	8,015	18,699	85,468
	10-Aug	8	8	7	105	652	3,333	2,005	15,624	21,441	55,164	1,889	12,360	25,994	86,586
	11-Aug	7	7	4	59	476	2,418	1,886	14,740	12,738	31,860	1,329	8,664	16,433	57,741
	12-Aug	3	3	0	0	1,743	11,626	821	6,682	7,966	31,438	1,172	8,227	11,702	57,973
	13-Aug			3	48	1,884	10,176	389	3,040	7,335	18,339	619	4,031	10,230	35,634
	17-Aug			2	29	429	2,265	318	2,616	919	2,302	399	2,599	2,067	9,811
	19-Aug			10	148	573	3,154	1,503	12,780	2,396	5,995	1,106	7,197	5,588	29,274

-Continued-

Table 5. (page 10 of 12)

Stat Area	Catch Date[a,b,c]	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total Salmon	
		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
	20-Aug	3	3	11	184	1,125	6,893	1,271	11,403	1,117	4,133	563	3,937	4,087	26,550
27374	**TOTAL**	14	119	198	2,454	51,898	316,519	38,725	291,363	283,579	854,629	29,331	201,534	403,731	1,666,499
	AVG.WT.				12.4		6.1		7.5		3.0		6.9		
27380	16-Jul	3	3	7	129	4,379	27,286	397	2,738	1,083	3,167	378	2,675	6,244	35,995
	20-Jul			0	0	2,442	15,886	187	1,479	1,081	2,771	239	1,605	3,949	21,741
	21-Jul	4	4	3	65	3,575	23,190	258	2,036	1,589	3,974	372	2,513	5,797	31,778
	23-Jul			4	46	1,500	10,076	45	348	300	1,140	55	426	1,904	12,036
27380	**TOTAL**	8	10	14	240	11,896	76,438	887	6,601	4,053	11,052	1,044	7,219	17,894	101,550
	AVG.WT.				17.1		6.4		7.4		2.7		6.9		
27390	13-Jul	5	5	1	14	2,935	18,020	1,436	10,798	2,840	9,785	343	2,831	7,555	41,448
	14-Jul	6	6	6	89	4,217	27,779	1,170	9,450	2,608	9,268	529	4,308	8,530	50,894
	15-Jul	4	4	7	170	3,123	21,601	296	2,235	1,400	4,102	286	2,249	5,112	30,357
	16-Jul	3	3	0	0	3,889	27,221	257	1,774	666	2,540	408	2,867	5,220	34,402
	21-Jul			1	6	500	3,247	423	2,667	269	942	92	649	1,285	7,511
	23-Jul			5	80	453	2,826	306	2,084	462	2,318	152	990	1,378	8,298
	26-Jul	5	5	1	24	2,046	14,209	328	2,305	2,468	9,750	515	3,215	5,358	29,503
	27-Jul	3	3	2	39	325	1,952	464	3,633	1,340	5,316	226	1,771	2,357	12,711
	30-Jul	4	4	0	0	834	5,741	159	1,117	1,560	6,239	83	588	2,636	13,685
	31-Jul	4	4	0	0	1,831	12,249	271	2,136	4,511	18,091	247	1,808	6,860	34,284
	5-Aug			0	0	55	372	6	40	300	1,210	12	81	373	1,703
	6-Aug	3	3	12	141	544	3,590	194	1,539	1,899	6,643	277	2,215	2,926	14,128
	10-Aug	4	4	22	202	503	3,458	958	7,853	3,535	12,803	732	5,568	5,750	29,884
	11-Aug	4	4	25	288	280	1,752	1,039	8,191	3,571	12,501	1,024	8,113	5,939	30,845
	12-Aug	4	4	8	212	585	4,063	1,116	9,843	7,137	28,583	1,140	7,949	9,986	50,650
	13-Aug			6	78	450	3,067	463	4,517	1,612	6,484	450	3,020	2,981	17,166
	16-Aug	3	3	5	84	92	552	538	4,310	1,214	3,642	506	4,044	2,355	12,632
	17-Aug	3	3	0	0	15	81	10	70	65	196	40	318	130	665
	18-Aug	5	5	13	180	184	1,108	698	5,614	951	3,052	329	2,619	2,175	12,573
27390	**TOTAL**	21	67	114	1,607	22,861	152,888	10,132	80,176	38,408	143,465	7,391	55,203	78,906	433,339
	AVG.WT.				14.1		6.7		7.9		3.7		7.5		

-Continued-

Table 5. (page 11 of 12)

Stat Area	Catch Date[a,b,c]	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total Salmon	
		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
27394	3-Aug	4	4	6	60	204	1,250	560	4,474	3,725	16,800	354	2,758	4,849	25,342
	4-Aug			30	306	340	2,117	984	7,122	5,753	18,412	837	5,867	7,944	33,824
	5-Aug			50	347	60	314	53	467	214	748	32	254	409	2,130
	11-Aug			27	380	128	768	841	5,891	1,555	4,977	369	2,653	2,920	14,669
	12-Aug	4	4	73	769	307	1,885	2,084	16,660	2,814	9,856	923	7,378	6,201	36,548
	13-Aug	3	3	35	540	197	1,184	847	6,773	2,574	9,036	829	6,632	4,482	24,165
	16-Aug			8	37	49	260	246	2,281	512	2,028	315	2,226	1,130	6,832
27394	**TOTAL**	7	17	229	2,439	1,285	7,778	5,615	43,668	17,147	61,857	3,659	27,768	27,935	143,510
	AVG.WT.				10.7		6.1		7.8		3.6		7.6		
27540	3-Jul			1	10	78	426	0	0	22	51	4,998	34,991	5,099	35,478
	4-Jul			0	0	0	0	0	0	0	0	7,760	54,942	7,760	54,942
	13-Jul			0	0	1,293	7,251	205	1,190	663	3,190	123	715	2,284	12,346
	14-Jul			10	100	3,161	17,728	422	2,475	1,899	9,197	336	1,975	5,828	31,475
	15-Jul			0	0	666	3,264	33	203	397	1,960	102	600	1,198	6,027
	16-Jul			0	0	1,028	6,070	15	92	286	1,420	106	650	1,435	8,232
	21-Jul			3	33	273	1,680	394	3,110	973	2,430	250	1,680	1,893	8,933
	23-Jul	3	4	17	290	2,733	16,500	4,936	31,815	6,569	32,845	2,147	13,515	16,402	94,965
	26-Jul	3	3	10	193	339	2,041	42	290	1,089	5,130	166	1,142	1,646	8,796
	27-Jul			16	204	250	1,578	15	122	1,050	4,412	50	392	1,381	6,708
	30-Jul			0	0	82	510	196	1,280	1,619	8,097	141	920	2,038	10,807
	31-Jul	3	3	0	0	1,865	11,573	1,130	7,130	5,303	22,348	755	4,805	9,053	45,856
	3-Aug	5	5	1	18	383	2,382	500	3,214	4,848	24,241	682	4,280	6,414	34,135
	4-Aug			2	46	378	2,446	397	3,591	4,566	18,190	463	3,322	5,806	27,595
	5-Aug	5	5	12	248	647	3,683	1,240	8,310	8,276	28,606	959	6,147	11,134	46,994
	6-Aug	3	3	4	63	1,405	9,778	795	7,177	9,667	38,729	1,170	8,115	13,041	63,862
	10-Aug	5	5	7	128	1,119	7,426	349	2,385	5,646	22,030	1,145	8,212	8,266	40,181
	11-Aug	5	6	20	300	937	6,374	940	7,379	9,311	36,916	1,679	12,006	12,887	62,975
	12-Aug	5	6	16	257	1,221	6,116	1,241	9,691	12,193	30,492	1,445	9,402	16,116	55,958
	13-Aug	4	4	1	48	2,246	14,411	777	6,227	11,584	44,691	2,132	15,033	16,740	80,410
	16-Aug	4	4	19	283	188	1,093	328	2,595	818	3,120	371	2,590	1,724	9,681
	17-Aug	8	8	4	65	1,564	8,600	1,714	13,191	5,989	22,143	1,722	11,917	10,993	55,916
27540	**TOTAL**	18	76	143	2,286	21,856	130,930	15,669	111,467	92,768	360,238	28,702	197,351	159,138	802,272
	AVG.WT.				16.0		6.0		7.1		3.9		6.9		

-Continued-

Table 5. (page 12 of 12)

Stat Area	Catch Date	Fishing Effort		Chinook		Sockeye		Coho		Pink		Chum		Total Salmon	
		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
27550	13-Jul			25	488	661	4,374	6	41	420	1,348	28	210	1,140	6,461
	14-Jul			17	236	624	4,070	3	20	435	1,335	30	246	1,109	5,907
	26-Jul			8	148	110	706	5	44	622	2,554	38	296	783	3,748
	30-Jul			12	185	695	4,877	33	265	2,671	9,707	259	2,072	3,670	17,106
	31-Jul			5	72	571	3,990	16	131	1,778	6,227	124	998	2,494	11,418
	4-Aug	3	3	5	89	244	1,621	126	1,011	3,141	12,311	272	1,924	3,788	16,956
	6-Aug			3	44	445	3,109	3	37	1,465	5,894	150	1,055	2,066	10,139
	17-Aug			3	49	99	515	569	4,673	937	2,344	490	3,184	2,098	10,765
	18-Aug	3	3	7	104	657	3,482	171	1,397	1,223	3,058	556	3,626	2,614	11,667
	19-Aug	3	3	24	380	559	2,911	149	1,198	800	2,000	444	2,892	1,976	9,381
	20-Aug			2	50	775	5,439	390	3,512	1,030	4,188	755	5,192	2,952	18,381
27550	**TOTAL**	9	20	111	1,845	5,440	35,094	1,471	12,329	14,522	50,966	3,146	21,695	24,690	121,929
	AVG.WT.				16.6		6.5		8.4		3.5		6.9		
GRAND	**TOTAL**	85	3,348	4,395	66,530	1,054,172	6,438,050	129,512	1,045,823	776,988	2,586,026	128,841	917,648	2,093,908	11,054,077
	AVG.WT.				15.1		6.1		8.1		3.3		7.1		

[a]Fishing effort omitted where there are confidentiality concerns (vessels < 3).

[b]Does not include salmon caught for personal use or for subsistence.

[c]Does not include salmon caught at Cape Igvak or Southeastern District Mainland.

[d]Catch from the department's test fishery within Chignik Lagoon.

[e]Catch from the Chignik Seiners's Association Co-operative catches.

Table 6. Comparison of average weights of salmon, based on weights from fish tickets, caught in the Chignik Bay District and all other districts combined, 1983-1998.

Year [a,b,c]	Chinook		Average	Sockeye		Average	Coho		Average	Pink		Average	Chum		Average
	Number	Pounds	Weight	Number	Pounds	Weight	Number	Pounds	Weight	Number	Pounds	Weight	Number	Pounds	Weight
Chignik Bay District															
1983	3,560	80,193	22.5	1,597,059	10,536,850	6.6	29,519	250,786	8.5	27,284	97,222	3.6	16,747	130,154	7.8
1984	3,696	93,096	25.2	1,942,822	13,579,107	7.0	72,722	658,240	9.1	165,178	670,923	4.1	8,173	61,159	7.5
1985	1,810	43,396	24.0	812,605	4,820,590	5.9	156,579	1,431,798	9.1	14,429	55,900	3.9	4,906	31,307	6.4
1986	2,592	60,723	23.4	1,389,172	9,488,499	6.8	60,197	481,706	8.0	191,264	767,714	4.0	18,167	134,735	7.4
1987	1,931	42,848	22.2	1,559,757	11,508,187	7.4	77,333	654,640	8.5	13,887	51,855	3.7	5,163	38,429	7.4
1988	4,331	96,241	22.2	529,540	3,873,621	7.3	94,292	819,677	8.7	119,794	460,519	3.8	7,013	55,911	8.0
1989	3,532	76,491	21.7	1,156,782	7,950,548	6.9	68,231	559,127	8.2	27,691	94,218	3.4	1,587	11,546	7.3
1990	3,719	80,915	21.8	1,400,069	9,374,800	6.7	61,260	497,901	8.1	94,528	319,928	3.4	11,460	77,739	6.8
1991	1,996	47,206	23.7	1,487,421	10,196,187	6.9	56,574	481,741	8.5	76,163	231,960	3.0	17,545	115,553	6.6
1992	3,181	67,840	21.3	792,889	5,177,003	6.5	80,946	676,752	8.4	178,105	729,324	4.1	12,711	79,207	6.2
1993	5,240	85,848	16.4	762,730	4,675,799	6.1	48,808	349,816	7.2	55,909	174,334	3.1	8,116	44,235	5.5
1994	1,808	36,773	20.3	908,042	5,696,656	6.3	70,541	669,451	9.5	59,425	261,622	4.4	25,250	174,189	6.9
1995	3,008	76,580	25.5	1,083,707	7,335,791	6.8	54,646	460,937	8.4	106,939	416,116	3.9	14,588	114,029	7.8
1996	1,579	38,326	24.3	1,003,683	7,915,161	7.9	45,361	416,985	9.2	1,523	5,861	3.8	639	5,140	8.0
1997	1,296	25,997	20.1	406,763	2,579,448	6.3	32,847	298,021	9.1	1,523	5,861	3.8	639	5,140	8.0
1998	1,721	31,397	18.2	621,868	3,751,669	6.0	23,063	223,668	9.7	26,054	100,971	3.9	7,352	55,053	7.5
Average Weight [d]															
1988-1997			21.7			6.8			8.5			3.7			7.1
All other Districts															
1983	1,928	15,966	8.3	227,116	1,389,979	6.1	32,408	237,417	7.3	293,894	1,103,666	3.8	142,665	1,075,112	7.5
1984	622	6,471	10.4	717,797	4,957,180	6.9	37,406	291,725	7.8	279,626	980,326	3.5	55,130	424,808	7.7
1985	78	1,508	19.3	109,546	629,469	5.7	34,609	278,049	8.0	145,699	587,831	4.0	17,900	113,974	6.4
1986	445	6,049	13.6	256,662	1,766,361	6.9	56,436	385,489	6.8	455,861	1,606,597	3.5	158,473	1,169,683	7.4
1987	720	6,634	9.2	339,081	2,493,527	7.4	73,081	535,163	7.3	232,888	847,705	3.6	122,098	905,512	7.4
1988	2,965	32,639	11.0	266,301	1,840,831	6.9	276,128	2,069,750	7.5	2,877,365	10,262,986	3.6	260,762	2,140,466	8.2
1989	10	207	20.7	2,505	18,732	7.5	2	13	6.5	21	51	2.4	37	342	9.2
1990	6,182	53,350	8.6	693,581	4,434,969	6.4	68,871	435,844	6.3	455,480	1,355,716	3.0	258,544	1,679,280	6.5
1991	1,161	19,497	16.8	408,244	2,748,265	6.7	109,051	701,216	6.4	1,093,085	3,125,671	2.9	243,551	1,560,646	6.4
1992	7,651	70,250	9.2	484,560	3,195,899	6.6	229,997	1,685,939	7.3	1,375,968	5,069,835	3.7	209,423	1,513,119	7.2
1993	14,275	148,405	10.4	934,621	5,586,833	6.0	180,651	1,111,428	6.2	1,592,468	5,139,463	3.2	114,244	691,812	6.1
1994	2,111	35,092	16.6	710,931	4,449,179	6.3	166,663	1,327,375	8.0	371,638	1,233,037	3.3	202,026	1,456,822	7.2

-Continued-

Table 6. (page 2 of 2)

Year	Chinook Number	Chinook Pounds	Average Weight	Sockeye Number	Sockeye Pounds	Average Weight	Coho Number	Coho Pounds	Average Weight	Pink Number	Pink Pounds	Average Weight	Chum Number	Chum Pounds	Average Weight
1995	2,253	34,607	15.4	640,338	4,186,530	6.5	225,959	1,601,149	7.1	1,951,059	6,934,270	3.6	366,361	2,700,958	7.4
1996	1,526	24,277	15.9	954,670	6,987,584	7.3	147,865	1,068,962	7.2	182,283	530,357	2.9	99,152	774,700	7.8
1997	1,736	21,227	12.2	362,920	2,281,141	6.3	58,061	458,488	7.9	842,908	2,778,472	3.3	155,266	1,191,859	7.7
1998	2,674	35,133	13.1	432,304	2,686,381	6.2	106,449	822,155	7.7	750,934	2,485,055	3.3	121,489	862,595	7.1
Average Weight[d] 1988-1997			13.7			6.7			7.0			3.2			7.4

[a]Does not include salmon caught for personal use.

[b]Does not include salmon caught with a subsistence permit.

[c]Does not include salmon caught at Cape Igvak or Southeastern District Mainland.

[d]Ten-Year average weight was calculated using 1988-1997 data, including 1989 (oil spill year) where openings and closures were restricted.

Table 7. Salmon processors in the Chignik Management Area, 1998.

Processor Code	Name	Type	Address
F3495	Norquest Seafoods Inc.	Chignik-Shoreside Proccessor	4225 23rd Avenue West Seattle, Wa. 98199
F0365	Sea Catch Inc.	Chignik-Shoreside Processor	4241 21st Avenue West #300, Seattle, Wa. 98199

Table 8. Commercial salmon catches in the Chignik Management Area by year, 1960-1998.

	Number of Fish by Species[a]					
Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1960	643	715,969	8,933	557,327	486,699	1,769,571
1961	409	322,890	3,088	443,510	178,760	948,657
1962	435	364,753	1,292	1,519,305	364,335	2,250,120
1963	1,744	408,606	9,933	1,662,363	112,697	2,195,343
1964	1,099	556,890	2,735	1,682,365	333,336	2,576,425
1965	1,592	599,553	9,602	1,118,158	120,589	1,849,494
1966	636	219,794	16,050	683,215	238,883	1,158,578
1967	882	462,000	13,150	108,981	75,543	660,556
1968	674	977,382	2,200	1,290,660	223,861	2,494,777
1969	3,448	394,135	18,103	1,779,736	67,721	2,263,143
1970	1,226	1,325,734	15,348	1,157,172	437,252	2,936,732
1971	2,010	1,016,136	14,557	612,290	353,952	1,998,945
1972	464	378,218	19,615	72,161	78,298	548,756
1973	525	870,354	22,322	25,472	8,717	927,390
1974	255	662,905	12,245	69,515	34,312	779,232
1975	549	399,593	53,283	66,165	25,161	544,751
1976	2,290	1,163,728	35,167	395,287	81,403	1,677,875
1977	710	1,972,207	17,430	604,806	110,452	2,705,605
1978	1,603	1,576,283	20,212	985,114	120,889	2,704,101
1979	1,253	1,049,497	99,129	1,905,198	188,907	3,243,984
1980	2,344	859,966	119,573	1,093,184	252,521	2,327,588
1981	2,694	1,839,469	78,805	1,162,613	580,332	3,663,913
1982	5,236	1,521,686	300,273	873,384	390,096	3,090,675
1983	5,488	1,824,175	61,927	321,178	159,412	2,372,180
1984	4,318	2,660,619	110,128	444,804	63,303	3,283,172
1985	1,888	922,151	191,188	160,128	22,806	1,298,161
1986	3,037	1,645,834	116,633	647,125	176,640	2,589,269
1987	2,651	1,898,838	150,414	246,775	127,261	2,425,939
1988	7,296	795,841	370,420	2,997,159	267,775	4,438,491
1989	3,542	1,159,287	68,233	27,712	1,624	1,260,398
1990	9,901	2,093,650	130,131	550,008	270,004	3,053,694
1991	3,157	1,895,665	165,625	1,169,248	261,096	3,494,791
1992	10,832	1,277,449	310,943	1,554,073	222,134	3,375,431
1993	19,515	1,697,351	229,459	1,648,377	122,360	3,717,062
1994	3,919	1,618,973	237,204	431,063	227,276	2,518,435
1995	5,261	1,724,045	280,605	2,057,998	380,949	4,448,858
1996	3,105	1,958,353	193,226	183,806	99,791	2,438,281
1997	3,032	769,683	90,908	844,431	155,905	1,863,959
1998	4,395	1,054,172	129,512	776,988	128,841	2,093,908
Avg (1968-77)	1,215	916,039	21,027	607,326	142,113	1,687,721
Avg (1978-87)	3,051	1,579,852	124,828	783,950	208,217	2,699,898
Avg (1988-97)	6,956	1,499,030	207,675	1,146,388	200,891	3,060,940

[a]Does not include salmon caught for personal use.
Catches (1970 - 1998) were updated using historical electronic fish ticket databases.
Does not include salmon caught at Cape Igvak or Southeastern District Mainland.
Includes the department's test fishery and the Chignik Seiner's Co-op. catches.

Table 9. Estimated salmon escapement by district and statistical area in the Chignik Management Area, 1998.

		Species					
District	StatArea	Chinook	Sockeye[a]	Coho[b]	Pink[c]	Chum	total
Chignik Bay	27110	3,075	701,128	27,831	24,407	4,458	762,399
	Total	3,075	701,128	27,831	24,407	4,458	762,399
Central	27220	0	0	0	53,103	593	80,916
	27230	0	0	0	52,733	500	80,463
	27250	0	0	0	105,077	30,889	163,216
	Total	0	0	0	210,913	31,982	242,895
Eastern	27260	0	500	2,200	254,867	72,300	357,127
	27270	0	0	10,300	237,033	600	275,203
	27272	0	0	0	83,500	3,813	114,585
	27280	0	0	0	247,450	12,933	287,663
	27290	0	0	0	233,600	0	260,890
	27292	0	0	0	70,667	1,000	98,959
	27296	0	700	150	146,053	7050	181,249
	Total	0	1,200	12,650	1,273,170	97,696	1,384,716
Western	27370	0	0	10,300	31,200	600	69,470
	27372	0	0	0	96,843	3,813	128,028
	27380	0	0	0	6,330	200	33,910
	27382	0	0	0	1,076	125	28,583
	27384	0	0	0	0	25,317	52,701
	27394	0	0	0	15,000	500	42,894
	Total	0	0	10,300	150,449	30,555	191,304
Perryville	27540	0	0	42,600	163,740	212,736	446,616
	27550	0	0	50	50,400	1,500	79,500
	27560 [d]	0	0	148	8,700	225	36,500
	Total	0	0	42,798	222,840	214,461	479,966
All District Total		3,075	702,328	93,579	1,881,779	379,152	3,061,280

[a] Includes sockeye salmon from Chignik weir counts, aerial surveys, and post weir estimates using methods from Ruggerone (1989).

[b] Coho escapement estimates were from Chignik River weir counts, aerial suveys, and methods from Ruggerone (1989). Coho aerial surveys were incomplete because of budget constraints.

[c] Escapement estimates for pink and chum were based on Chignik River weir counts, aerial surveys, and area under the curve methods developed by Johnson and Barrett (1988).

[d] A October 23 foot survey in Kametolook River showed 74 actual coho expanded to 148 coho salmon. These data were included in the above table.

Table 10. Chinook salmon daily and cumulative escapement estimates through the Chignik weir by day, 1998.

Date	Escapement[a,b] Daily	Cumulative	Date	Escapement Daily	Cumulative
Jun-17	12	12			
Jun-18	12	24	Jul-28	22	2,625
Jun-19	1	25	Jul-29	55	2,680
Jun-20	33	58	Jul-30	16	2,696
Jun-21	37	95	Jul-31	12	2,708
Jun-22	13	108	Aug-1	24	2,732
Jun-23	6	114	Aug-2	21	2,753
Jun-24	36	150	Aug-3	12	2,765
Jun-25	48	198	Aug-4	24	2,789
Jun-26	24	222	Aug-5	36	2,825
Jun-27	54	276	Aug-6	0	2,825
Jun-28	93	369	Aug-7	30	2,855
Jun-29	72	441	Aug-8	27	2,882
Jun-30	54	495	Aug-9	33	2,915
Jul-1	30	525	Aug-10	18	2,933
Jul-2	36	561	Aug-11	0	2,933
Jul-3	60	621	Aug-12	12	2,945
Jul-4	44	665	Aug-13	30	2,975
Jul-5	90	755	Aug-14	6	2,981
Jul-6	39	794	Aug-15	18	2,999
Jul-7	148	942	Aug-16	33	3,032
Jul-8	150	1,092	Aug-17	12	3,044
Jul-9	18	1,110	Aug-18	12	3,056
Jul-10	111	1,221	Aug-19	6	3,062
Jul-11	84	1,305	Aug-20	0	3,062
Jul-12	78	1,383	Aug-21	6	3,068
Jul-13	57	1,440	Aug-22	0	3,068
Jul-14	81	1,521	Aug-23	0	3,068
Jul-15	114	1,635	Aug-24	6	3,074
Jul-16	24	1,659	Aug-25	0	3,074
Jul-17	139	1,798	Aug-26	0	3,074
Jul-18	81	1,879	Aug-27	0	3,074
Jul-19	259	2,138	Aug-28	0	3,074
Jul-20	84	2,222	Aug-29	0	3,074
Jul-21	90	2,312	Aug-30	1	3,075
Jul-22	53	2,365	Aug-31	0	3,075
Jul-23	66	2,431	Sep-1	0	3,075
Jul-24	74	2,505	Sep-2	0	3,075
Jul-25	50	2,555	Sep-3	0	3,075
Jul-26	30	2,585	Sep-4	0	3,075
Jul-27	18	2,603	Sep-5	Weir Out	

[a] No adjustments are made for chinook salmon that spawn below the weir or those that are removed by the sport fishery.

[b] The chinook salmon minimum biological escapement goal is 1,450 fish.

Table 11. Sockeye salmon daily and cumulative escapement through the Chignik weir by day, 1998.

Date	Escapement Daily	Cumulative	Date	Escapement Daily	Cumulative
May-24	0	0	Jul-11	1,584	489,582
May-25	44	44	Jul-12	2,364	491,946
May-26	12	56	Jul-13	10,251	502,197
May-27	46	102	Jul-14	12,196	514,393
May-28	36	138	Jul-15	2,602	516,995
May-29	35	173	Jul-16	1,674	518,669
May-30	986	1,159	Jul-17	5,069	523,738
May-31	785	1,944	Jul-18	7,057	530,795
Jun-1	881	2,825	Jul-19	5,389	536,184
Jun-2	698	3,523	Jul-20	2,763	538,947
Jun-3	1,053	4,576	Jul-21	2,999	541,946
Jun-4	1,146	5,722	Jul-22	1,741	543,687
Jun-5	1,548	7,270	Jul-23	1,222	544,909
Jun-6	2,763	10,033	Jul-24	9,099	554,008
Jun-7	597	10,630	Jul-25	20,232	574,240
Jun-8	1,872	12,502	Jul-26	4,463	578,703
Jun-9	4,943	17,445	Jul-27	2,182	580,885
Jun-10	11,425	28,870	Jul-28	3,228	584,113
Jun-11	13,890	42,760	Jul-29	12,014	596,127
Jun-12	13,583	56,343	Jul-30	10,058	606,185
Jun-13	4,165	60,508	Jul-31	4,072	610,257
Jun-14	22,518	83,026	Aug-1	1,578	611,835
Jun-15	25,714	108,740	Aug-2	1,736	613,571
Jun-16	30,498	139,238	Aug-3	4,812	618,383
Jun-17	25,877	165,115	Aug-4	879	619,262
Jun-18	19,974	185,089	Aug-5	2,220	621,482
Jun-19	20,882	205,971	Aug-6	1,301	622,783
Jun-20	23,244	229,215	Aug-7	2,062	624,845
Jun-21	27,874	257,089	Aug-8	3,501	628,346
Jun-22	16,953	274,042	Aug-9	5,776	634,122
Jun-23	44,591	318,633	Aug-10	3,701	637,823
Jun-24	30,615	349,248	Aug-11	1,739	639,562
Jun-25	28,228	377,476	Aug-12	1,361	640,923
Jun-26	26,105	403,581	Aug-13	1,359	642,282
Jun-27	30,811	434,392	Aug-14	1,605	643,887
Jun-28	26,977	461,369	Aug-15	1,963	645,850
Jun-29	11,265	472,634	Aug-16	3,944	649,794
Jun-30	2,208	474,842	Aug-17	3,379	653,173
Jul-1	771	475,613	Aug-18	2,424	655,597
Jul-2	2,094	477,707	Aug-19	1,793	657,390
Jul-3	2,507	480,214	Aug-20	1,830	659,220
Jul-4	1,405	481,619	Aug-21	1,650	660,870
Jul-5	693	482,312	Aug-22	2,314	663,184
Jul-6	994	483,306	Aug-23	4,460	667,644
Jul-7	1,112	484,418	Aug-24	1,870	669,514
Jul-8	900	485,318	Aug-25	1,738	671,252
Jul-9	1,298	486,616	Aug-26	2,289	673,541
Jul-10	1,382	487,998	Aug-27	2,049	675,590

-Continued-

Table 11. (page 2 of 2)

Date	Escapement Daily	Cumulative	Date	Escapement Daily	Cumulative
Aug-28	1,003	676,593	Sep-7	1,654	695,882
Aug-29	2,794	679,387	Sep-8	1,341	697,223
Aug-30	1,830	681,217	Sep-9	1,028	698,251
Aug-31	1,389	682,606	Sep-10	715	698,966
Sep-1	1,817	684,423	Sep-11	624	699,590
Sep-2	1,843	686,266	Sep-12	534	700,124
Sep-3	1,906	688,172	Sep-13	443	700,567
Sep-4	1,229	689,401	Sep-14	353	700,920
Weir Removal			Sep-15	208	701,128
Sep-5	2,180	691,581			
Sep-6	2,647	694,228	Post Weir Total	11,727	

[a]Post weir counts from September 5 through September 15 were based on the regression of a three point moving average of catch on escapement. Since the regression value was low (r^2=.3), post weir escapement was validated using catch/escapement ratios and interpolation between actual catch dates.

Table 12. Pink, chum, coho, and sockeye jack salmon daily and cumulative escapement through the Chignik weir by day, 1998.

Date	Pink Escapement		Chum Escapement		Coho Escapement		Sockeye Jack Escapement	
	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
Jun-13 [a]	0	0	6	6	0	0	0	0
Jun-14	0	0	0	6	0	0	0	0
Jun-15	0	0	0	6	0	0	0	0
Jun-16	0	0	0	6	0	0	0	0
Jun-17	0	0	0	6	0	0	0	0
Jun-18	0	0	0	6	0	0	0	0
Jun-19	0	0	0	6	0	0	0	0
Jun-20	0	0	0	6	0	0	0	0
Jun-21	0	0	0	6	0	0	0	0
Jun-22	0	0	0	6	0	0	0	0
Jun-23	0	0	0	6	0	0	0	0
Jun-24	0	0	0	6	0	0	252	252
Jun-25	0	0	0	6	0	0	72	324
Jun-26	0	0	0	6	0	0	25	349
Jun-27	0	0	0	6	0	0	84	433
Jun-28	0	0	0	6	0	0	138	571
Jun-29	0	0	0	6	0	0	43	614
Jun-30	0	0	0	6	0	0	12	626
Jul-1	0	0	0	6	0	0	6	632
Jul-2	0	0	0	6	0	0	0	632
Jul-3	0	0	0	6	0	0	18	650
Jul-4	0	0	0	6	0	0	14	664
Jul-5	0	0	0	6	0	0	48	712
Jul-6	0	0	0	6	0	0	7	719
Jul-7	0	0	0	6	0	0	12	731
Jul-8	0	0	0	6	0	0	25	756
Jul-9	0	0	0	6	0	0	30	786
Jul-10	0	0	0	6	0	0	24	810
Jul-11	0	0	0	6	0	0	48	858
Jul-12	36	36	6	12	0	0	54	912
Jul-13	6	42	0	12	0	0	6	918
Jul-14	0	42	0	12	0	0	18	936
Jul-15	0	42	0	12	0	0	0	936
Jul-16	18	60	0	12	0	0	6	942
Jul-17	6	66	0	12	0	0	12	954
Jul-18	18	84	0	12	0	0	30	984
Jul-19	6	90	6	18	0	0	0	984
Jul-20	0	90	0	18	0	0	0	984
Jul-21	21	111	0	18	0	0	0	984
Jul-22	6	117	6	24	0	0	0	984
Jul-23	18	135	0	24	0	0	12	996
Jul-24	12	147	0	24	0	0	108	1,104
Jul-25	30	177	0	24	0	0	141	1,245
Jul-26	36	213	6	30	0	0	48	1,293

-Continued-

Table 12. (page 2 of 3)

Date	Pink Escapement		Chum Escapement		Coho Escapement		Sockeye Jack Escapement	
	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
Jul-27	30	243	6	36	0	0	24	1,317
Jul-28	0	243	0	36	0	0	4	1,321
Jul-29	18	261	0	36	0	0	30	1,351
Jul-30	30	291	0	36	0	0	60	1,411
Jul-31	12	303	0	36	0	0	36	1,447
Aug-1	12	315	0	36	0	0	12	1,459
Aug-2	18	333	0	36	6	6	12	1,471
Aug-3	114	447	12	48	0	6	74	1,545
Aug-4	39	486	0	48	0	6	12	1,557
Aug-5	180	666	0	48	0	6	42	1,599
Aug-6	84	750	0	48	0	6	48	1,647
Aug-7	219	969	0	48	60	66	6	1,653
Aug-8	552	1,521	0	48	0	66	0	1,653
Aug-9	448	1,969	0	48	30	96	162	1,815
Aug-10	207	2,176	0	48	12	108	0	1,815
Aug-11	90	2,266	0	48	0	108	0	1,815
Aug-12	126	2,392	0	48	0	108	78	1,893
Aug-13	151	2,543	6	54	6	114	42	1,935
Aug-14	281	2,824	6	60	0	114	18	1,953
Aug-15	400	3,224	12	72	6	120	12	1,965
Aug-16	494	3,718	0	72	42	162	24	1,989
Aug-17	891	4,609	6	78	18	180	6	1,995
Aug-18	708	5,317	0	78	24	204	18	2,013
Aug-19	767	6,084	0	78	48	252	48	2,061
Aug-20	469	6,553	0	78	96	348	0	2,061
Aug-21	380	6,933	0	78	120	468	6	2,067
Aug-22	518	7,451	0	78	126	594	36	2,103
Aug-23	435	7,886	18	96	324	918	12	2,115
Aug-24	400	8,286	6	102	330	1,248	0	2,115
Aug-25	399	8,685	6	108	336	1,584	0	2,115
Aug-26	461	9,146	12	120	1,284	2,868	12	2,127
Aug-27	221	9,367	0	120	444	3,312	18	2,145
Aug-28	282	9,649	12	132	147	3,459	6	2,151
Aug-29	360	10,009	0	132	626	4,085	21	2,172
Aug-30	390	10,399	18	150	2,283	6,368	6	2,178
Aug-31	424	10,823	0	150	1,818	8,186	6	2,184
Sep-1	216	11,039	0	150	1,935	10,121	0	2,184
Sep-2	217	11,256	0	150	2,065	12,186	18	2,202
Sep-3	123	11,379	6	156	758	12,944	12	2,214
Sep-4	111	11,490	0	156	1,180	14,124	0	2,214
Weir Removed								
Sep-5	Post Weir Coho Estimates[b]				2,318	16,442		
Sep-6					3,697	20,139		
Sep-7					1,854	21,993		
Sep-8					1,530	23,523		

-Continued-

Table 12. (page 3 of 3)

Date	Pink Escapement Daily	Pink Escapement Cumulative	Chum Escapement Daily	Chum Escapement Cumulative	Coho Escapement Daily	Coho Escapement Cumulative	Sockeye Jack Escapement Daily	Sockeye Jack Escapement Cumulative
Sep-9					1,206	24,729		
Sep-10					888	25,617		
Sep-11					750	26,367		
Sep-12					611	26,978		
Sep-13					472	27,450		
Sep-14					334	27,784		
Sep-15					37	27,821		
			Post Weir Total		13,697			
Total		11,490		156		41,518		2,214

[a]Although the first day of counting for pink, chum, coho, and sockeye jack salmon was on May 24, the first fish tallied from any of these species was actually on June 13.

[b] Post weir counts from September 5 though September 15 were based on the regression of catch on escapement (r^2=.86). Catch was estimated on non catch days by interpolation between the nearest catch days. Coho escapement was then estimated on actual and interpolated catches.

Table 13. Economic value of salmon and average income per commercial salmon permit holder, in dollars, in the Chignik Management Area, 1970-1998.

Date	Species										Total Value	Number Of Permits Fished (Active)	Total Value Per Permit
	Chinook[b]		Sockeye[b]		Coho[b]		Pink[b]		Chum[b]				
	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average			
1970	$6,129	$89	$2,190,272	$31,743	$18,397	$267	$635,673	$9,213	$376,025	$5,450	$3,226,496	69	$46,761
1971	$6,472	$84	$2,034,279	$26,419	$23,240	$302	$366,693	$4,762	$326,760	$4,244	$2,757,444	77	$35,811
1972	$2,028	$28	$825,498	$11,308	$35,699	$489	$48,401	$663	$87,759	$1,202	$999,385	79	$12,650
1973	$5,255	$72	$3,030,057	$41,508	$73,663	$1,009	$20,610	$282	$10,180	$139	$3,139,765	77	$40,776
1974	$2,941	$32	$3,618,781	$39,767	$31,933	$351	$64,069	$704	$51,125	$562	$3,768,849	94	$40,094
1975	$6,561	$76	$1,384,271	$16,240	$213,539	$2,581	$104,115	$12,211	$61,704	$717	$1,770,190	86	$20,584
1976	$13,800	$179	$4,751,000	$61,701	$138,000	$1,792	$568,300	$7,381	$183,600	$2,384	$5,654,700	77	$73,438
1977	$18,828	$212	$14,553,720	$163,525	$104,819	$1,178	$920,881	$10,347	$368,066	$4,136	$15,966,314	88	$181,435
1978	$56,700	$597	$15,653,500	$164,774	$116,400	$1,225	$1,131,500	$11,911	$404,500	$4,258	$17,362,600	95	$182,764
1979	$32,050	$317	$11,345,503	$112,332	$710,192	$7,031	$2,622,269	$25,963	$126,866	$1,256	$14,836,880	101	$146,900
1980	$67,657	$670	$5,532,290	$54,775	$520,655	$5,155	$1,477,060	$14,624	$1,061,963	$10,514	$8,659,625	101	$85,739
1981	$75,231	$730	$17,262,119	$167,593	$439,900	$4,271	$1,881,334	$18,265	$2,431,421	$23,606	$22,090,005	103	$214,466
1982	$75,276	$717	$13,038,510	$124,176	$1,782,027	$16,972	$578,184	$5,506	$1,356,597	$12,920	$16,830,594	105	$160,291
1983	$96,159	$962	$10,728,088	$107,281	$219,650	$2,197	$240,171	$2,402	$421,713	$4,217	$11,705,781	100	$117,058
1984	$114,502	$1,134	$20,402,076	$202,000	$759,972	$7,525	$330,916	$3,276	$146,024	$1,446	$21,753,490	101	$215,381
1985	$67,088	$664	$7,997,834	$79,186	$1,471,418	$14,568	$140,076	$1,387	$59,475	$589	$8,735,891	101	$86,494
1986	$84,800	$848	$16,882,290	$168,823	$667,740	$6,677	$356,147	$3,562	$456,546	$4,565	$18,447,523	100	$184,475
1987	$72,739	$706	$24,783,033	$240,612	$1,035,129	$10,050	$269,868	$2,620	$339,819	$3,299	$26,500,588	102	$259,810
1988	$286,740	$2,811	$14,350,354	$140,690	$4,153,424	$40,720	$6,771,266	$66,385	$2,189,293	$21,464	$27,751,077	102	$272,069
1989[a]	$78,999	$790	$13,047,378	$130,474	$436,892	$4,369	$32,994	$3,299	$4,745	$47	$13,601,008	100	$136,010
1990	$185,256	$1,834	$22,509,923	$222,871	$700,309	$6,934	$502,693	$4,977	$878,510	$8,698	$24,776,691	101	$245,314
1991	$50,027	$486	$11,002,784	$106,823	$650,626	$6,317	$402,916	$3,912	$502,860	$4,882	$12,609,213	101	$124,844
1992	$193,326	$1,858	$12,552,025	$120,693	$1,323,107	$12,722	$811,882	$7,807	$414,005	$3,981	$15,294,345	101	$151,429
1993	$175,690	$1,722	$8,210,106	$80,491	$730,622	$7,163	$637,666	$6,252	$184,012	$1,804	$9,938,096	102	$97,432
1994	$38,096	$385	$10,046,245	$101,477	$1,094,415	$11,055	$226,504	$2,208	$430,888	$4,352	$11,836,148	99	$119,557

-Continued-

Table 13. (page 2 of 2)

Date	Chinook Total	Chinook Average	Sockeye Total	Sockeye Average	Coho Total	Coho Average	Pink Total	Pink Average	Chum Total	Chum Average	Total Value	Number Of Permits Fished (Active)	Total Value Per Permit
1995	$60,174	$602	$11,969,210	$119,692	$834,337	$8,343	$977,811	$9,778	$634,780	$6,348	$14,476,312	100	$144,763
1996	$25,041	$250	$12,640,560	$126,406	$447,228	$4,472	$24,827	$248	$32,279	$323	$13,169,935	100	$131,699
1997	$20,642	$211	$4,860,589	$49,598	$453,905	$4,632	$348,042	$3,551	$239,400	$2,443	$5,922,577	98	$60,434
1998	$31,934	$376	$6,631,192	$78,014	$397,413	$4,675	$310,323	$3,651	$137,647	$1,619	$7,508,509	85	$88,335
Averages													
1978-87	$74,220	$735	$14,362,524	$142,155	$772,308	$7,567	$902,753	$8,952	$680,492	$6,667	$16,692,298	102	$177,309
1988-97	$111,399	$1,095	$12,118,917	$119,922	$1,082,487	$10,673	$1,073,660	$10,842	$551,077	$5,434	$14,937,540	100	$148,355

[a]Exxon Valdez Oil Spill.

[b]Average price per pound is based on Commercial Fisheries Entry Commission data from Processor End of Season reports. These average prices reflect payment made to fishers at the time of delivery and do not include post season settlements or bonuses.

Table 14. Chignik River chinook salmon escapement, Chignik Management Area catch, and total run, 1960-1998.

Year	Escapement[a]	Catch[b]	Total Run
1960	-	643	643
1961	-	409	409
1962	-	435	435
1963	564	1,744	2,308
1964	914	1,099	2,013
1965	942	1,592	2,534
1966	822	636	1,458
1967	1,500	882	2,382
1968	1,000	674	1,674
1969	600	3,448	4,048
1970	2,500	1,226	3,726
1971	2,000	2,010	4,010
1972	1,500	464	1,964
1973	822	525	1,347
1974	672	255	927
1975	877	549	1,426
1976	700	2,290	2,990
1977	798	710	1,508
1978	1,197	1,603	2,800
1979	1,050	1,253	2,303
1980	876	2,344	3,220
1981	1,603	2,694	4,297
1982	2,412	5,236	7,648
1983	1,943	5,488	7,431
1984	5,806	4,318	10,124
1985	3,144	1,888	5,032
1986	3,612	3,037	6,649
1987	2,624	2,651	5,275
1988	4,868	7,296	12,164
1989	3,316	3,542	6,858
1990	4,364	9,901	14,265
1991	4,531	3,157	7,702
1992	3,806	10,832	14,638
1993	1,946	19,515	21,461
1994	2,963	3,919	6,935
1995	4,288	5,261	9,549
1996	3,488	3,105	6,593
1997	3,824	3,032	6,856
1998	3,075	4,395	7,470
Average(1968-77)	1,147	1,215	2,362
Average(1978-87)	2,427	3,051	5,478
Average (1988-97)	3,739	6,956	10,702

[a]No escapement adjustments are made for chinook salmon that spawn below the weir, or those removed by the sport fishery.

[b]Does not include chinook salmon utilized for personal use or listed on a subsistence permit.

Table 15. Sockeye salmon age composition for Black Lake from scale samples collected at the Black Lake outlet, 1998.

Date		Ages												Total
		0.2	0.3	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.2	3.3	
6/19/98	Numbers	1	0	0	62	143	1	0	76	53	0	0	2	338
	Percent	0.3	0.0	0.0	18.3	42.3	0.3	0.0	22.5	15.7	0.0	0.0	0.6	
6/20/98	Numbers	7	2	0	127	382	0	1	259	165	1	1	8	953
	Percent	0.7	0.2	0.0	13.3	40.1	0.0	0.1	27.2	17.3	0.1	0.1	0.8	
6/21/98	Numbers	2	0	1	102	133	2	1	107	50	0	0	1	399
	Percent	0.5	0.0	0.3	25.6	33.3	0.5	0.3	26.8	12.5	0.0	0.0	0.3	
Total	Numbers	10	2	1	291	658	3	2	442	268	1	1	11	1,690
	Percent	0.6	0.1	0.1	17.2	38.9	0.2	0.1	26.2	15.9	0.1	0.1	0.7	

Table 16. Sockeye and chinook salmon age compositions for Chignik Lagoon as determined from Chignik Lagoon commercial fishery scale samples, 1998.

Date	Total (n)	Age Composition 0.2	0.4	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.2	3.3	3.4
11-Jun [a]	515	0.8	0.0	0.0	21.4	36.3	0.2	0.0	21.2	19.8	0.0	0.2	0.2	0.0
15-Jun [a]	489	0.6	0.0	0.2	20.9	33.3	0.2	0.0	18.8	25.4	0.0	0.0	0.6	0.0
18-Jun [b]	501	0.0	0.0	0.0	15.0	39.9	0.2	0.0	15.4	29.1	0.0	0.0	0.4	0.0
23-Jun [a]	510	0.4	0.0	0.2	17.3	36.3	0.2	0.0	18.2	26.7	0.2	0.2	0.4	0.0
26-Jun [a]	512	0.0	0.2	0.2	15.6	36.3	0.0	0.4	18.8	27.7	0.0	0.4	0.4	0.0
29-Jun	508	0.4	0.0	0.4	13.8	37.0	0.4	0.6	12.0	34.1	0.0	0.2	1.2	0.0
3-Jul	483	0.0	0.0	0.2	11.8	30.4	0.6	0.2	14.3	40.2	0.0	1.2	1.0	0.0
6-Jul	514	0.0	0.0	0.2	8.0	19.5	0.0	0.0	12.1	59.7	0.0	0.4	0.2	0.0
9-Jul	343	0.0	0.0	0.0	4.7	12.5	0.6	0.0	10.5	69.7	0.0	2.0	0.0	0.0
13-Jul	496	0.0	0.0	0.0	4.2	12.1	0.0	0.0	12.5	68.5	0.2	2.2	0.2	0.0
20-Jul	485	0.0	0.0	0.6	4.1	7.6	0.2	0.6	22.3	59.0	0.2	4.9	0.4	0.0
26-Jul	501	0.0	0.0	0.0	3.4	11.6	0.0	0.0	24.4	55.9	0.2	4.4	0.2	0.0
31-Jul	511	0.0	0.0	0.0	3.3	8.8	0.0	0.4	30.9	49.3	0.4	6.1	0.6	0.2
11-Aug	316	0.0	0.0	0.0	1.9	5.4	0.3	0.9	49.7	33.2	0.9	7.6	0.0	0.0
13-Aug	485	0.0	0.0	0.0	1.4	6.8	0.2	1.9	45.2	31.3	1.4	11.3	0.4	0.0
17-Aug	492	0.0	0.0	0.0	2.0	5.7	0.0	0.4	53.5	24.4	0.4	13.2	0.4	0.0
20-Aug	496	0.0	0.0	0.0	1.0	4.6	0.0	4.6	52.0	26.4	0.2	11.1	0.0	0.0
26-Aug	465	0.0	0.0	0.2	3.0	1.9	0.6	1.5	55.9	22.8	1.9	11.6	0.4	0.0
31-Aug	467	0.0	0.0	0.0	3.2	2.4	1.1	2.6	55.0	21.8	2.1	11.1	0.6	0.0
Total	9,089	0.1	0.0	0.1	8.5	18.9	0.2	0.7	28.2	37.8	0.4	4.5	0.4	0.0

Date	Total (n)	Chinook Salmon Age Compositon (percent) 1.1	1.2	1.3	1.4	2.1	2.2	2.3
All Season	206	16	35	102	52	0	0	1

[a]Catch from the department's test fishery within Chignik Lagoon.

[b]Catch from the Chignik Seiners's Association Co-operative catches.

Table 17. Sockeye salmon escapement through the Chignik River weir for Chignik Lake and Black Lake using daily percentages attributable to Chignik Lake, derived from the inseason scale pattern analysis and time of entry curve, 1998.

	Total		Chignik Lake			Black Lake
Date	Daily	Cumulative	Percent	Daily	Cumulative	Cumulative
May-24	0	0	0.0	0	0	0
May-25	44	44	0.7	0	0	44
May-26	12	56	0.9	0	0	56
May-27	46	102	1.1	0	1	101
May-28	36	138	1.2	0	1	137
May-29	35	173	1.6	1	2	171
May-30	986	1,159	2.6	26	28	1,131
May-31	785	1,944	3.6	29	56	1,888
Jun-1	881	2,825	4.1	36	93	2,732
Jun-2	698	3,523	4.2	30	122	3,401
Jun-3	1,053	4,576	4.5	48	170	4,406
Jun-4	1,146	5,722	5.5	63	233	5,489
Jun-5	1,548	7,270	6.5	100	332	6,938
Jun-6	2,763	10,033	7.5	207	540	9,493
Jun-7	597	10,630	8.5	51	591	10,039
Jun-8	1,872	12,502	9.0	168	759	11,743
Jun-9	4,943	17,445	10.2	504	1,262	16,183
Jun-10	11,425	28,870	11.4	1,305	2,567	26,303
Jun-11	13,890	42,760	12.8	1,779	4,346	38,414
Jun-12	13,583	56,343	13.7	1,864	6,210	50,133
Jun-13	4,165	60,508	14.7	610	6,821	53,687
Jun-14	22,518	83,026	15.3	3,455	10,276	72,750
Jun-15	25,714	108,740	16.0	4,117	14,392	94,348
Jun-16	30,498	139,238	16.6	5,048	19,440	119,798
Jun-17	25,877	165,115	17.1	4,425	23,866	141,249
Jun-18	19,974	185,089	18.9	3,774	27,639	157,450
Jun-19	20,882	205,971	19.3	4,021	31,661	174,310
Jun-20	23,244	229,215	19.9	4,620	36,280	192,935
Jun-21	27,874	257,089	20.5	5,702	41,983	215,106
Jun-22	16,953	274,042	21.3	3,610	45,593	228,449
Jun-23	44,591	318,633	22.3	9,925	55,519	263,114
Jun-24	30,615	349,248	23.0	7,053	62,571	286,677
Jun-25	28,228	377,476	25.4	7,174	69,745	307,731
Jun-26	26,105	403,581	27.8	7,261	77,007	326,574
Jun-27	30,811	434,392	30.2	9,302	86,309	348,083
Jun-28	26,977	461,369	31.8	8,575	94,883	366,486
Jun-29	11,265	472,634	33.1	3,731	98,614	374,020
Jun-30	2,208	474,842	35.0	774	99,388	375,454
Jul-1	771	475,613	37.5	289	99,677	375,936
Jul-2	2,094	477,707	39.8	834	100,510	377,197
Jul-3	2,507	480,214	42.1	1,057	101,567	378,647
Jul-4	1,405	481,619	44.3	622	102,189	379,430
Jul-5	693	482,312	46.2	320	102,509	379,803
Jul-6	994	483,306	48.4	481	102,990	380,316
Jul-7	1,112	484,418	49.7	552	103,543	380,875

-Continued-

Table 17. (page 2 of 3)

Date	Total		Chignik Lake			Black Lake
	Daily	Cumulative	Percent	Daily	Cumulative	Cumulative
Jul-8	900	485,318	50.5	455	103,997	381,321
Jul-9	1,298	486,616	49.7	645	104,642	381,974
Jul-10	1,382	487,998	65.9	911	105,553	382,444
Jul-11	1,584	489,582	65.9	1,044	106,597	382,984
Jul-12	2,364	491,946	71.9	1,700	108,297	383,649
Jul-13	10,251	502,197	74.9	7,678	115,975	386,227
Jul-14	12,196	514,393	77.8	9,488	125,463	388,931
Jul-15	2,602	516,995	80.8	2,102	127,566	389,431
Jul-16	1,674	518,669	83.8	1,403	128,968	389,703
Jul-17	5,069	523,738	86.7	4,395	133,363	390,375
Jul-18	7,057	530,795	89.7	6,330	139,693	391,100
Jul-19	5,389	536,184	92.7	4,996	144,689	391,494
Jul-20	2,763	538,947	95.7	2,644	147,333	391,613
Jul-21	2,999	541,946	98.6	2,957	150,290	391,655
Jul-22	1,741	543,687	98.6	1,717	152,007	391,679
Jul-23	1,222	544,909	95.7	1,169	153,176	391,731
Jul-24	9,099	554,008	95.7	8,708	161,884	392,123
Jul-25	20,232	574,240	95.7	19,362	181,246	392,993
Jul-26	4,463	578,703	95.7	4,271	185,517	393,185
Jul-27	2,182	580,885	95.7	2,088	187,605	393,278
Jul-28	3,228	584,113	95.7	3,089	190,694	393,417
Jul-29	12,014	596,127	98.8	11,870	202,564	393,561
Jul-30	10,058	606,185	98.8	9,937	212,502	393,682
Jul-31	4,072	610,257	98.8	4,023	216,525	393,731
Aug-1	1,578	611,835	100.0	1,578	218,103	393,731
Aug-2	1,736	613,571	100.0	1,736	219,839	393,731
Aug-3	4,812	618,383	100.0	4,812	224,651	393,731
Aug-4	879	619,262	100.0	879	225,530	393,731
Aug-5	2,220	621,482	100.0	2,220	227,750	393,731
Aug-6	1,301	622,783	100.0	1,301	229,051	393,731
Aug-7	2,062	624,845	100.0	2,062	231,113	393,731
Aug-8	3,501	628,346	100.0	3,501	234,614	393,731
Aug-9	5,776	634,122	100.0	5,776	240,390	393,731
Aug-10	3,701	637,823	100.0	3,701	244,091	393,731
Aug-11	1,739	639,562	100.0	1,739	245,830	393,731
Aug-12	1,361	640,923	100.0	1,361	247,191	393,731
Aug-13	1,359	642,282	100.0	1,359	248,550	393,731
Aug-14	1,605	643,887	100.0	1,605	250,155	393,731
Aug-15	1,963	645,850	100.0	1,963	252,118	393,731
Aug-16	3,944	649,794	100.0	3,944	256,062	393,731
Aug-17	3,379	653,173	100.0	3,379	259,441	393,731
Aug-18	2,424	655,597	100.0	2,424	261,865	393,731
Aug-19	1,793	657,390	100.0	1,793	263,658	393,731
Aug-20	1,830	659,220	100.0	1,830	265,488	393,731
Aug-21	1,650	660,870	100.0	1,650	267,138	393,731
Aug-22	2,314	663,184	100.0	2,314	269,452	393,731
Aug-23	4,460	667,644	100.0	4,460	273,912	393,731

-Continued-

Table 17. (page 3 of 3)

	Total		Chignik Lake			Black Lake
DATE	Daily	Cumulative	Percent	Daily	Cumulative	Cumulative
Aug-24	1,870	669,514	100.0	1,870	275,782	393,731
Aug-25	1,738	671,252	100.0	1,738	277,520	393,731
Aug-26	2,289	673,541	100.0	2,289	279,809	393,731
Aug-27	2,049	675,590	100.0	2,049	281,858	393,731
Aug-28	1,003	676,593	100.0	1,003	282,861	393,731
Aug-29	2794	679,387	100.0	2,794	285,655	393,731
Aug-30	1830	681,217	100.0	1,830	287,485	393,731
Aug-31	1389	682,606	100.0	1,389	288,874	393,731
Sep-1	1817	684,423	100.0	1,817	290,691	393,731
Sep-2	1843	686,266	100.0	1,843	292,534	393,731
Sep-3	1906	688,172	100.0	1,906	294,440	393,731
Sep-4	1229	689,401	100.0	1,229	295,669	393,731
Sep-5	Weir Out					

Table 18. Harvest of Chignik bound sockeye salmon in the Chignik, Cape Igvak, and Southeastern District Mainland Areas from 1964-1998.

Year	Chignik Area Catch	Chignik Area Percent	Cape Igvak[a] Catch	Cape Igvak[a] Percent	Mainland Area[a] Catch	Mainland Area[a] Percent	Total All Areas
1964[b]	556,890	90.57	14,980	2.44	43,021	7.00	614,891
1965	599,553	89.94	11,021	1.65	56,020	8.40	666,594
1966	219,794	87.99	18,003	7.21	12,011	4.81	249,808
1967	462,000	91.48	23,014	4.56	20,021	3.96	505,035
1968	977,382	82.53	135,951	11.48	70,959	5.99	1,184,292
1969	394,135	78.96	97,982	19.63	7,013	1.41	499,130
1970[c]	1,325,734	72.51	434,394	23.76	68,181	3.73	1,828,309
1971	1,016,136	80.33	197,614	15.62	51,272	4.05	1,265,022
1972	378,218	87.99	33,865	7.88	17,752	4.13	429,835

1964-72 catch and percentage figures are total for the entire season. Catch figures and percentages after 1972 are only through July 25.

1973[d]	769,258	88.97	57,348	6.63	37,983	4.39	864,859
1974	530,278	73.61	122,071	16.95	68,029	9.44	720,378
1975	115,984	81.78	23,635	16.67	2,205	1.55	141,824
1976	792,024	82.96	117,926	12.35	44,730	4.69	954,680
1977	1,547,285	90.40	128,852	7.53	35,502	2.07	1,711,639
1978[e,f]	1,454,389	85.38	227,014	13.33	22,064	1.30	1,703,467
1979[g]	794,504	91.81	13,950	1.61	56,878	6.57	865,332
1980	670,001	91.31	32	0.00	63,724	8.68	733,757
1981	1,606,300	79.85	282,727	14.06	122,533	6.09	2,011,560
1982	1,250,768	84.46	167,401	11.30	62,767	4.24	1,480,936
1983	1,450,832	72.68	318,048	15.93	227,392	11.39	1,996,272
1984	2,474,405	73.93	449,372	13.43	423,068	12.64	3,346,845
1985[h]	696,169	79.91	123,627	14.19	51,421	5.60	871,217
1986	1,456,729	82.64	188,017	10.67	118,006	6.69	1,762,752
1987	1,659,615	77.99	321,506	15.11	146,886	6.90	2,128,007
1988	675,487	95.67	11,218	1.59	19,320	2.74	706,025
1989	496,044	99.10	0	0.00	4,485	0.90	500,529
1990	1,205,575	83.61	107,706	7.47	128,599	8.92	1,441,880
1991[i]	1,958,954	80.42	324,329	13.31	152,714	6.27	2,435,997
1992[j]	1,054,309	81.07	152,358	11.72	93,845	7.22	1,300,512
1993	1,495,098	77.72	300,055	15.60	128,536	6.68	1,923,689
1994[k]	1,632,435	80.61	250,230	12.36	142,350	7.03	2,025,015
1995	1,024,785	79.90	169,530	13.22	88,301	6.88	1,282,616
1996[l]	1,710,249	79.70	308,327	14.37	127,201	5.93	2,145,777
1997	443,892	100.00	0	0.00	0.00	0.00	443,892
1998[m,n]	786,466	91.20	8,812	1.00	66,893	7.80	862,171

[a] The Cape Igvak and Southeastern District Mainland figures represent 80% of the total sockeye catches for those areas as it is estimated that roughly 80% of the sockeye caught in the Cape Igvak section and Southeastern District Mainland Area (excluding sockeye caught in Northwest Stepovak Section from 1964-1991 and in Orzinski bay in 1992 are destined for Chignik.

-Continued-

[b] The data from 1964-1972 are based on total yearly catches. Prior to 1973, Cape Igvak and Southeastern District Mainland fisheries were set by regulation to weekly fishing periods, usually 5 days per week. Time modifications were implemented when poor escapements occurred at Chignik.

[c] Catches (1970-1992) were updated using historical electronic fish ticket databases.

[d] During 1973 through 1977 all three fisheries were managed on a day by day basis.

[e] From 1978-1991, the Cape Igvak Fishery Management Plan allocated 15 percent of the total sockeye catch destined for Chignik.

[f] During 1978, seining prior to July 11 was disallowed in the Southeastern District Mainland. The set gillnet fishery was allowed to fish 3 days per week through July 10 after which the fishery was managed on the basis of local stocks.

[g] During 1979-1984 and prior to July 11, fishing was allowed 5 days per week in the Southeastern District Mainland Area with a ceiling of an estimated 60,000 sockeye destined for Chignik. If the Chignik Area sockeye catch was 1,000,000 or more before July 11, the 60,000 ceiling was to be dropped.

[h] Beginning in 1985, Southeastern District Mainland Area (excluding the Northwest Stepovak Section from 1964-1991 and Orzinski Bay statistical area) was placed on an allocation of 6.2 percent of the total estimated Chignik sockeye catch through July 25. After July 25, the Southeastern District Mainland is managed on a local stock basis. The allocation changed to 6.0 percent beginning in 1988. Seining is still not allowed prior to July 11.

[i] Includes overescapement of 278,305 sockeye counted past the weir during the Chignik Area seiners' boycott (Jun 23-Jul 4).

[j] Review of Orzinski Lake historical and current escapement records led the Alaska Board of Fisheries to redefine the Southeastern District Mainland Management Plan. Beginning in 1992, the Southeastern District Mainland fishery (excluding Orzinski Bay) was placed on an allocation of 7.0 percent of the total estimated Chignik sockeye catch through July 25.

[k] Includes overescapement of 208,921 sockeye counted past the weir during the Chignik Area seiners' strike (Jun 22-Jun 25).

-Continued-

[l] During their January 1996 meeting, the BOF increased the area to be managed for local Orzinski Lake sockeye salmon from only Orzinski Bay to the entire Northwest Stepovak Section. Prior to July 1, the entire Northwest Stepovak Section will be managed on an allocation based on the strength of the Chignik sockeye salmon runs. Beginning July 1, the Northwest Stepovak Section will be managed entirely on local stocks. The BOF also decreased the percentage of sockeye salmon allocated to the SEDM fishery from 7% to 6% to attempt to maintain traditional harvest levels of Chignik bound sockeye salmon in the SEDM fishery.

[m] During their January 1998 meeting, the BOF reduced the area managed entirely for local Orzinski Lake sockeye salmon from the entire Northwest Stepovak Section to only Orzinski Bay. All sockeye salmon caught in the Northwest Stepovak Section beginning July 1 will still be considered 100% local fish and not counted toward the 6% allocation. Remainder of SEDM sockeye salmon harvest allocated as 80% Chignik bound fish. Assures minimum harvest of 600,000 sockeye salmon in Chignik through July 25.

[n] Includes overescapement of 52,131 sockeye salmon escapement counted past the weir during the Chignik Area seiners' strike (Jun 16-June 28) and strike fund catches of 7,714 fish caught on June 18.

Table 19. Total Chignik Management Area and 80 percent of the sockeye harvest in the Cape Igvak and Southeastern District Mainland Areas through July 25, and season's total for each area1964-1998.

	Harvest to July 25 Only[a]				Harvest for Entire Season[a]			
Year	Chignik	Igvak	SEDM	Total	Chignik	Igvak	SEDM	Total
1964	-	-	-	-	556,890	14,980	43,021	614,891
1965	-	-	-	-	599,553	11,021	56,020	666,594
1966	-	-	-	-	219,794	18,003	12,011	249,808
1967	-	-	-	-	462,000	23,014	20,021	505,035
1968	-	-	-	-	977,382	135,951	70,959	1,184,292
1969	-	-	-	-	394,135	97,982	7,013	499,130
1970	-	-	-	-	1,325,734	434,394	68,181	1,828,309
1971	-	-	-	-	1,016,136	197,614	51,272	1,265,022
1972	-	-	-	-	378,218	33,865	17,752	429,835
1973	769,258	57,348	37,983	864,589	870,354	57,348	38,635	966,337
1974	530,278	122,071	68,029	720,378	662,905	122,071	68,980	853,956
1975	115,984	23,635	2,205	141,824	399,593	23,635	2,205	425,433
1976	792,024	117,926	44,730	954,680	1,163,728	117,978	46,155	1,327,861
1977	1,547,285	128,852	35,502	1,711,639	1,972,207	128,852	39,405	2,140,464
1978	1,454,389	227,014	22,064	1,703,467	1,576,283	227,052	24,102	1,827,437
1979	794,504	13,950	56,878	865,332	1,049,497	20,436	83,837	1,153,770
1980	670,001	32	63,724	733,757	859,966	631	88,752	949,349
1981	1,606,300	282,727	122,533	2,011,560	1,839,469	284,211	167,357	2,291,037
1982	1,250,768	167,401	62,767	1,480,936	1,521,686	168,295	86,886	1,776,867
1983	1,450,832	318,048	227,392	1,996,272	1,824,175	323,004	297,429	2,444,608
1984	2,474,405	449,372	423,068	3,346,845	2,660,619	450,066	487,938	3,598,623
1985	696,169	123,627	51,421	871,217	922,151	125,134	93,206	1,140,491
1986	1,456,729	188,017	118,006	1,762,752	1,645,834	188,129	147,056	1,981,019
1987	1,659,615	321,506	146,886	2,128,007	1,898,538	344,117	188,983	2,431,638
1988	675,487	11,218	19,320	706,025	792,416	28,783	79,101	900,300
1989	496,044	-	4,485	500,529	1,152,854	-	138,594	1,291,448
1990	1,205,575	107,706	128,599	1,441,880	2,088,128	133,821	216,944	2,438,893
1991[b]	1,958,954	324,329	152,714	2,435,997	2,165,864	341,869	228,934	2,736,667
1992	1,054,309	152,358	93,845	1,300,512	1,265,026	156,318	177,715	1,599,059
1993	1,495,098	300,055	128,536	1,923,689	1,691,907	329,907	222,591	2,244,405
1994[c]	1,632,435	250,230	142,350	2,025,015	1,818,755	257,827	226,562	2,303,144
1995	1,024,785	169,530	88,301	1,282,616	1,715,022	197,697	270,589	2,183,308
1996	1,710,249	308,327	127201	2,018,576	1,954,036	309,543	183,321	2,446,900
1997	443,892	0	2	443,894	758,384	300	73,113	831,797
1998[d]	786,466	8,813	66,893	862,172	1,114,017	8,845	177,546	1,300,408

[a] Catches (1970-1996) were updated using historical electronic fish ticket databases. Data does not include test fishery catches.

[b] Includes overescapement of 278,305 sockeye salmon counted past the weir during the Chignik Seiners' Association boycott (June 23-July 4).

[c] Includes overescapement of 208,921 sockeye salmon counted past the weir during the Chignik Seiners' Association strike (June 22-June 25).

[d] Includes overescapement of 52,131 sockeye salmon counted past the weir to June 28 during the Chignik Seiners Association strike and 7,714 fish caught for a strike fund by the Chignik Seiners' Association June 18.

Table 20. Estimated stock composition of age 1.3 Chignik sockeye salmon from commercial catch and test fishery samples, based on postseason scale pattern analysis, 1998.

Sample Date	Sample Size (n)	Stock	Adjusted[a] Estimate	Estimated Variance	Smoothed[b] Estimate
11-Jun	100	Black Lake	0.834	0.07112	0.885
		Chignik Lake	0.166	0.07112	0.115
15-Jun	100	Black Lake	0.820	0.07173	0.844
		Chignik Lake	0.180	0.07173	0.156
18-Jun	100	Black Lake	0.878	0.06930	0.829
		Chignik Lake	0.122	0.06930	0.171
23-Jun	100	Black Lake	0.790	0.07295	0.781
		Chignik Lake	0.210	0.07295	0.219
26-Jun	100	Black Lake	0.674	0.07599	0.751
		Chignik Lake	0.326	0.07599	0.249
29-Jun	100	Black Lake	0.790	0.07295	0.625
		Chignik Lake	0.210	0.07295	0.375
3-Jul	100	Black Lake	0.412	0.07903	0.630
		Chignik Lake	0.588	0.07903	0.370
6-Jul	86	Black Lake	0.688	0.08085	0.577
		Chignik Lake	0.312	0.08085	0.423
9-Jul	40	Black Lake	0.630	0.11672	0.511
		Chignik Lake	0.370	0.11672	0.489
13-Jul	57	Black Lake	0.216	0.09726	0.304
		Chignik Lake	0.784	0.09726	0.696
20-Jul	33	Black Lake	0.065	0.11246	0.094
		Chignik Lake	0.935	0.11246	0.906
26-Jul	54	Black Lake	0.000	0.08450	0.022
		Chignik Lake	1.000	0.08450	0.978

[a]Adjustments were made using Cook and Lord correction proceedures.

[b]Smoothing was done by a running average of 3, assuring an initial proportion of 0.0 and an ending proportion of 1.0 for Chignik Lake.

Table 21. Estimated stock composition of age 2.3 Chignik sockeye salmon from commercial catch and test fishery samples, based on postseason scale pattern analysis, 1998.

Sample Date	Sample Size (n)	Stock	Adjusted[a] Estimate	Estimated Variance	Smoothed[b] Estimate
11-Jun	98	Black Lake	0.818	0.08571	0.833
		Chignik Lake	0.182	0.08571	0.167
15-Jun	100	Black Lake	0.681	0.08693	0.776
		Chignik Lake	0.319	0.08693	0.224
18-Jun	100	Black Lake	0.828	0.08450	0.737
		Chignik Lake	0.172	0.08450	0.263
23-Jun	100	Black Lake	0.703	0.08207	0.770
		Chignik Lake	0.297	0.08207	0.230
26-Jun	100	Black Lake	0.779	0.08571	0.669
		Chignik Lake	0.221	0.08571	0.331
29-Jun	99	Black Lake	0.526	0.08875	0.602
		Chignik Lake	0.474	0.08875	0.398
3-Jul	100	Black Lake	0.502	0.08815	0.510
		Chignik Lake	0.498	0.08815	0.490
6-Jul	100	Black Lake	0.502	0.08815	0.447
		Chignik Lake	0.498	0.08815	0.553
9-Jul	100	Black Lake	0.338	0.08754	0.404
		Chignik Lake	0.662	0.08754	0.596
13-Jul	100	Black Lake	0.371	0.08754	0.349
		Chignik Lake	0.629	0.08754	0.651
20-Jul	100	Black Lake	0.338	0.08754	0.360
		Chignik Lake	0.662	0.08754	0.640
26-Jul	100	Black Lake	0.371	0.08754	0.236
		Chignik Lake	0.629	0.08754	0.764

[a]Adjustments were made using Cook and Lord correction proceedures.

[b]Smoothing was done by a running average of 3, assuring an initial proportion of 0.0 and an ending proportion of 1.0 for Chignik Lake.

Table 22. Daily Chignik River sockeye salmon escapement, catch destined to the Chignik Lakes system, and total run, by day and area (adjusted to Chignik Lagoon date), 1998.

		Catch Areas[a,b,c]								
Date	Chignik Weir Escapement	Chignik Lagoon	Hook Bay /Kujulik	Aniakchak	Eastern District	Cape Igvak	Western District	Perryville District	Southeastern Mainland	Daily Total
23-May	0	0	0	0	0	0	0	0	0	0
24-May	44	0	0	0	0	0	0	0	0	44
25-May	12	0	0	0	0	0	0	0	0	12
26-May	46	0	0	0	0	0	0	0	0	46
27-May	36	0	0	0	0	0	0	0	0	36
28-May	35	0	0	0	0	0	0	0	0	35
29-May	986	0	0	0	0	0	0	0	0	986
30-May	785	0	0	0	0	0	0	0	0	785
31-May	881	0	0	0	0	0	0	0	0	881
1-Jun	698	0	0	0	0	0	0	0	0	698
2-Jun	1,053	0	0	0	0	0	0	0	0	1,053
3-Jun	1,146	0	0	0	0	0	0	0	0	1,146
4-Jun	1,548	0	0	0	0	0	0	0	0	1,548
5-Jun	2,763	0	0	0	0	0	0	0	0	2,763
6-Jun	597	0	0	0	0	0	0	0	0	597
7-Jun	1,872	0	0	0	0	0	0	0	0	1,872
8-Jun	4,943	0	0	0	0	0	0	0	0	4,943
9-Jun	11,425	0	0	0	0	0	0	0	0	11,425
10-Jun	13,890	0	0	0	0	0	0	0	0	13,890
11-Jun	13,583	2,583	0	0	0	0	0	0	0	16,166
12-Jun	4,165	1,323	0	0	0	0	0	0	0	5,488
13-Jun	22,518	0	0	0	0	0	0	0	0	22,518
14-Jun	25,714	0	0	0	0	0	0	0	0	25,714
15-Jun	30,498	2,158	0	0	0	0	0	0	0	32,656
16-Jun	25,877	0	0	0	0	0	0	0	0	25,877
17-Jun	19,974	0	0	0	0	0	0	0	0	19,974
18-Jun	20,882	7,714	0	0	0	0	0	0	0	28,596
19-Jun	23,244	1,947	0	0	0	0	0	0	0	25,191
20-Jun	27,874	0	0	0	0	0	0	0	0	27,874
21-Jun	16,953	0	0	0	0	0	0	0	0	16,953
22-Jun	44,591	0	0	0	0	0	0	0	0	44,591
23-Jun	30,615	1,453	0	0	0	0	0	0	0	32,068
24-Jun	28,228	0	0	0	0	0	0	0	0	28,228
25-Jun	26,105	0	0	0	0	0	0	0	0	26,105
26-Jun	30,811	2,910	0	0	0	0	0	0	0	33,721
27-Jun	26,977	0	0	0	0	0	0	0	0	26,977
28-Jun	11,265	0	0	0	0	0	0	0	0	11,265
29-Jun	2,208	20,747	0	0	0	0	0	0	0	22,955
30-Jun	771	15,484	3,301	0	0	0	0	0	0	19,556
1-Jul	2,094	9,786	4,917	1,564	0	0	0	0	0	18,361
2-Jul	2,507	9,805	2,803	407	357	0	0	0	0	15,879
3-Jul	1,405	10,333	3,869	535	0	0	0	0	0	16,142
4-Jul	693	6,210	5,943	0	0	0	0	0	0	12,846
5-Jul	994	8,162	7,721	1,133	0	0	0	0	0	18,010
6-Jul	1,112	12,688	2,579	2,224	0	0	0	78	0	18,681
7-Jul	900	8,449	4,560	2,508	0	0	0	0	0	16,417
8-Jul	1,298	11,385	4,322	3,186	0	0	0	0	0	20,191
9-Jul	1,382	13,005	5,180	5,889	0	0	0	0	0	25,456
10-Jul	1,584	22,078	5,178	2,780	1,782	0	0	0	0	33,402
11-Jul	2,364	19,633	4,382	4,480	1,721	0	0	0	0	32,580

-Continued-

Table 22. (page 2 of 3)

Date	Chignik Weir Escapement	Catch Areas[a,b,c] Chignik Lagoon	Hook Bay /Kujulik	Aniakchak	Eastern District	Cape Igvak	Western District	Perryville District	Southeastern Mainland	Daily Total
12-Jul	10,251	621	3,980	5,365	1,560	0	0	0	0	21,777
13-Jul	12,196	22,785	0	5,020	1,499	0	0	0	0	41,500
14-Jul	2,602	21,394	2,587	530	1,980	0	0	0	0	29,093
15-Jul	1,674	25,156	4,238	3,017	0	0	7,099	0	0	41,184
16-Jul	5,069	30,783	4,047	5,573	0	0	6,543	1,954	0	53,969
17-Jul	7,057	2,745	10,877	3,197	0	0	6,686	3,785	0	34,347
18-Jul	5,389	22,812	452	7,467	0	0	12,354	666	0	49,140
19-Jul	2,763	29,726	10,312	1,909	0	0	0	1,028	0	45,738
20-Jul	2,999	25,421	13,925	5,057	0	0	0	0	0	47,402
21-Jul	1,741	20,734	7,997	6,740	0	0	0	0	0	37,212
22-Jul	1,222	19,994	7,052	4,688	0	0	2,442	0	0	35,398
23-Jul	9,099	14,606	4,670	4,978	0	0	14,388	0	0	47,741
24-Jul	20,232	0	5,031	5,051	0	0	1,306	273	0	31,893
25-Jul	4,463	23,992	0	2,472	0	0	4,029	0	22,956	57,912
26-Jul	2,182	18,724	6,786	0	0	1,795	0	2,733	43,937	76,157
27-Jul	3,228	17,748	7,054	1,345	0	1,407	0	0	0	30,782
28-Jul	12,014	3,203	7,461	0	0	3,777	8,032	0	0	34,487
29-Jul	10,058	5,256	327	1,262	0	1,219	6,183	449	0	24,754
30-Jul	4,072	12,044	0	0	9	614	0	250	0	16,989
31-Jul	1,578	10,145	2,077	75	0	0	0	0	2,348	16,223
1-Aug	1,736	9,142	2,131	615	0	33	2,210	0	31,218	47,052
2-Aug	4,812	0	3,885	464	0	0	3,995	777	10,278	24,211
3-Aug	879	9,470	0	467	0	0	0	2,436	0	13,252
4-Aug	2,220	7,499	2,360	0	0	0	0	0	5,092	17,171
5-Aug	1,301	3,872	1,369	343	0	0	835	0	9,973	17,693
6-Aug	2,062	2,008	731	851	0	0	571	383	3,398	10,004
7-Aug	3,501	2,350	1,074	278	0	0	496	622	5,930	14,251
8-Aug	5,776	0	620	402	0	0	1,099	647	6,461	15,005
9-Aug	3,701	459	0	50	0	0	0	1,850	0	6,060
10-Aug	1,739	4,835	175	0	0	0	0	0	0	6,749
11-Aug	1,361	3,805	1,882	164	0	0	0	0	1,642	8,854
12-Aug	1,359	2,845	2,507	770	0	0	1,155	0	2,241	10,877
13-Aug	1,605	2,313	2,284	829	0	0	884	1,119	1,680	10,714
14-Aug	1,963	2,241	2,240	725	0	0	2,635	937	2,337	13,078
15-Aug	3,944	0	1,774	1,313	0	0	2,531	1,221	3,283	14,066
16-Aug	3,379	3,238	0	648	0	0	0	2,246	0	9,511
17-Aug	2,424	2,147	1,935	0	0	0	0	0	0	6,506
18-Aug	1,793	3,574	1,149	0	0	0	141	0	0	6,657
19-Aug	1,830	3,658	1,633	280	0	0	444	188	0	8,033
20-Aug	1,650	3,633	396	755	0	0	184	1,663	0	8,281
21-Aug	2,314	702	3,844	174	0	0	573	657	0	8,264
22-Aug	4,460	0	289	635	0	0	1,125	559	0	7,068
23-Aug	1,870	4,815	0	127	0	0	0	775	0	7,587
24-Aug	1,738	2,205	3,329	0	0	0	0	0	0	7,272
25-Aug	2,289	3,729	2,809	371	0	0	0	0	0	9,198
26-Aug	2,049	1,968	2,128	146	0	0	0	0	0	6,291
27-Aug	1,003	3,917	2,113	105	0	0	0	0	0	7,138
28-Aug	2,794	0	2,557	0	0	0	0	0	0	5,351
29-Aug	1,830	4,039	0	291	0	0	0	0	0	6,160
30-Aug	1,389	2,032	1,740	0	0	0	0	0	0	5,161
31-Aug	1,817	2,053	2,170	0	0	0	0	0	0	6,040

-Continued-

Table 22. (page 3 of 3)

Date	Chignik Weir Escapement	Catch Areas[a,b,c] Chignik Lagoon	Hook Bay /Kujulik	Aniakchak	Eastern District	Cape Igvak	Western District	Perryville District	Southeastern Mainland	Daily Total
1-Sep	1,843	54	1,250	0	0	0	0	0	0	3,147
2-Sep	1,906	2,137	1,001	0	0	0	0	0	0	5,044
3-Sep	1,229	3,616	488	0	0	0	0	0	0	5,333
4-Sep	2,180	1,826	2,689	0	0	0	0	0	0	6,695
5-Sep	2,647	0	380	0	0	0	0	0	0	3,027
6-Sep	1,654	2,821	0	0	0	0	0	0	1,898	6,373
7-Sep	1,341	1,763	112	0	12	0	0	0	3,424	6,652
8-Sep	1,028	0	15	0	0	0	0	0	3,042	4,085
9-Sep	715	0	0	0	0	0	0	0	2,962	3,677
10-Sep	624	762	0	0	0	0	0	0	0	1,386
11-Sep	534	0	0	0	0	0	0	0	0	534
12-Sep	443	0	0	0	0	0	0	0	1,351	1,794
13-Sep	353	0	0	0	0	0	0	0	2,556	2,909
14-Sep	208	376	0	0	0	0	0	0	719	1,303
15-Sep	0	222	0	0	0	0	0	0	619	841
16-Sep	0	0	206	0	0	0	0	0	1,115	1,321
19-Sep	0	0	0	0	0	0	0	0	493	493
20-Sep	0	0	0	0	0	0	0	0	1,423	1,423
22-Sep	0	0	0	0	0	0	0	0	1,746	1,746
26-Sep	0	0	0	0	0	0	0	0	54	54
27-Sep	0	0	0	0	0	0	0	0	153	153
28-Sep	0	0	0	0	0	0	0	0	658	658
30-Sep	0	0	0	0	0	0	0	0	485	485
3-Oct	0	0	0	0	0	0	0	0	255	255
5-Oct	0	0	0	0	0	0	0	0	367	367
7-Oct	0	0	0	0	0	0	0	0	619	619
13-Oct	0	0	0	0	0	0	0	0	833	833
Total	701,128	621,868	208,893	99,255	8,920	8,845	87,940	27,296	177,546	1,941,691

[a]Assigned travel time to Chignik Lagoon from Cape Igvak and Southeastern District Mainland = 5 days, Eastern and Perryville Districts = 3 days, Western and Aniakchak = 2 days, Hook Bay and Kujulik Bay = 1 day, and Chignik Weir = (-) 1 day.

[b]Does not include catch designated for personal or subsistence use.

[c]Includes 80% of the catches for the entire season from Cape Igvak and Southeastern District Mainland.

Table 23. Daily and cumulative sockeye salmon escapement and catch as determined by postseason scale pattern analysis for the Black Lake stock (adjusted to Chignik Lagoon date), 1998.

Date	Escapement Counts	Catch[a,b]	Daily Total	Cumulative Catch and Escapement	Cumulative Percent
23-May	0	0	0	0	0.0
24-May	44	0	44	44	0.0
25-May	12	0	12	56	0.0
26-May	45	0	45	101	0.0
27-May	35	0	35	136	0.0
28-May	34	0	34	170	0.0
29-May	943	0	943	1,113	0.2
30-May	745	0	745	1,858	0.3
31-May	830	0	830	2,688	0.4
1-Jun	653	0	653	3,341	0.5
2-Jun	977	0	977	4,318	0.6
3-Jun	1,055	0	1,055	5,373	0.7
4-Jun	1,414	0	1,414	6,787	0.9
5-Jun	2,504	0	2,504	9,291	1.3
6-Jun	537	0	537	9,828	1.4
7-Jun	1,670	0	1,670	11,498	1.6
8-Jun	4,374	0	4,374	15,872	2.2
9-Jun	10,027	0	10,027	25,899	3.6
10-Jun	12,091	0	12,091	37,990	5.2
11-Jun	11,725	2,230	13,955	51,945	7.2
12-Jun	3,544	1,126	4,670	56,615	7.8
13-Jun	18,880	0	18,880	75,495	10.4
14-Jun	21,238	0	21,238	96,733	13.4
15-Jun	24,805	1,755	26,560	123,293	17.0
16-Jun	20,829	0	20,829	144,122	19.9
17-Jun	15,910	0	15,910	160,032	22.1
18-Jun	16,458	6,080	22,538	182,570	25.2
19-Jun	18,259	1,530	19,789	202,359	27.9
20-Jun	21,827	0	21,827	224,186	31.0
21-Jun	13,233	0	13,233	237,419	32.8
22-Jun	34,699	0	34,699	272,118	37.6
23-Jun	23,752	1,127	24,879	296,997	41.0
24-Jun	21,312	0	21,312	318,309	44.0
25-Jun	19,160	0	19,160	337,469	46.6
26-Jun	21,958	2,074	24,032	361,501	49.9
27-Jun	18,341	0	18,341	379,842	52.5
28-Jun	7,290	0	7,290	387,132	53.5
29-Jun	1,356	12,747	14,103	401,235	55.4
30-Jun	465	11,327	11,792	413,027	57.0
1-Jul	1,237	9,606	10,843	423,870	58.5
2-Jul	1,446	7,716	9,162	433,032	59.8
3-Jul	790	8,288	9,078	442,110	61.1
4-Jul	371	6,516	6,887	448,997	62.0
5-Jul	507	8,673	9,180	458,177	63.3
6-Jul	537	8,487	9,024	467,201	64.5
7-Jul	416	7,176	7,592	474,793	65.6
8-Jul	574	8,357	8,931	483,724	66.8
9-Jul	584	10,174	10,758	494,482	68.3
10-Jul	637	12,793	13,430	507,912	70.1
11-Jul	902	11,533	12,435	520,347	71.9
12-Jul	3,706	4,166	7,872	528,219	72.9

-Continued-

Table 23. (page 2 of 2)

Date	Escapement Counts	Catch[a,b]	Daily Total	Cumulative Catch and Escapement	Cumulative Percent
13-Jul	4,164	10,005	14,169	542,388	74.9
14-Jul	880	8,958	9,838	552,226	76.3
15-Jul	561	13,246	13,807	566,033	78.2
16-Jul	1,686	16,271	17,957	583,990	80.7
17-Jul	2,333	9,022	11,355	595,345	82.2
18-Jul	1,772	14,387	16,159	611,504	84.5
19-Jul	905	14,074	14,979	626,483	86.5
20-Jul	980	14,500	15,480	641,963	88.7
21-Jul	532	10,840	11,372	653,335	90.2
22-Jul	348	9,731	10,079	663,414	91.6
23-Jul	2,403	10,201	12,604	676,018	93.4
24-Jul	4,924	2,838	7,762	683,780	94.4
25-Jul	995	11,911	12,906	696,686	96.2
26-Jul	442	14,975	15,417	712,103	98.3
27-Jul	526	4,485	5,011	717,114	99.0
28-Jul	1,474	2,758	4,232	721,346	99.6
29-Jul	827	1,209	2,036	723,382	99.9
30-Jul	169	534	703	724,085	100.0

[a]Includes 80% of the catches for the entire season from Cape Igvak and Southeastern District Mainland.

[b]Does not include catch designated for personal or subsistence use.

Table 24. Daily and cumulative sockeye salmon escapement and catch as determined by postseason scale pattern analysis for the Chignik Lake Stock (adjusted to Chignik Lagoon date), 1998.

Date	Escapement Counts	Catch[a]	Daily Total	Cumulative Catch and Escapement	Cumulative Percent
23-May	0	0	0	0	0.0
24-May	0	0	0	0	0.0
25-May	0	0	0	0	0.0
26-May	1	0	1	1	0.0
27-May	1	0	1	2	0.0
28-May	1	0	1	3	0.0
29-May	43	0	43	46	0.0
30-May	40	0	40	86	0.0
31-May	51	0	51	137	0.0
1-Jun	45	0	45	182	0.0
2-Jun	76	0	76	258	0.0
3-Jun	91	0	91	349	0.0
4-Jun	134	0	134	483	0.0
5-Jun	259	0	259	742	0.0
6-Jun	60	0	60	802	0.0
7-Jun	202	0	202	1,004	0.0
8-Jun	569	0	569	1,573	0.1
9-Jun	1,398	0	1,398	2,971	0.2
10-Jun	1,799	0	1,799	4,770	0.4
11-Jun	1,858	353	2,211	6,981	0.6
12-Jun	621	197	818	7,799	0.6
13-Jun	3,638	0	3,638	11,437	0.9
14-Jun	4,476	0	4,476	15,913	1.3
15-Jun	5,693	403	6,096	22,009	1.8
16-Jun	5,048	0	5,048	27,057	2.2
17-Jun	4,064	0	4,064	31,121	2.6
18-Jun	4,424	1,634	6,058	37,179	3.1
19-Jun	4,985	417	5,402	42,581	3.5
20-Jun	6,047	0	6,047	48,628	4.0
21-Jun	3,720	0	3,720	52,348	4.3
22-Jun	9,892	0	9,892	62,240	5.1
23-Jun	6,863	326	7,189	69,429	5.7
24-Jun	6,916	0	6,916	76,345	6.3
25-Jun	6,945	0	6,945	83,290	6.8
26-Jun	8,853	836	9,689	92,979	7.6
27-Jun	8,636	0	8,636	101,615	8.3
28-Jun	3,975	0	3,975	105,590	8.7
29-Jun	852	8,000	8,852	114,442	9.4
30-Jun	306	7,458	7,764	122,206	10.0
1-Jul	857	6,661	7,518	129,724	10.7
2-Jul	1,061	5,656	6,717	136,441	11.2
3-Jul	615	6,449	7,064	143,505	11.8
4-Jul	322	5,637	5,959	149,464	12.3
5-Jul	487	8,343	8,830	158,294	13.0
6-Jul	575	9,082	9,657	167,951	13.8
7-Jul	484	8,341	8,825	176,776	14.5
8-Jul	724	10,536	11,260	188,036	15.4
9-Jul	798	13,900	14,698	202,734	16.7

-Continued-

Table 24. (page 2 of 3)

Date	Escapement Counts	Catch[a]	Daily Total	Cumulative Catch and Escapement	Cumulative Percent
10-Jul	947	19,025	19,972	222,706	18.3
11-Jul	1,462	18,683	20,145	242,851	19.9
12-Jul	6,545	7,360	13,905	256,756	21.1
13-Jul	8,032	19,299	27,331	284,087	23.3
14-Jul	1,722	17,533	19,255	303,342	24.9
15-Jul	1,113	26,264	27,377	330,719	27.2
16-Jul	3,383	32,629	36,012	366,731	30.1
17-Jul	4,724	18,268	22,992	389,723	32.0
18-Jul	3,617	29,364	32,981	422,704	34.7
19-Jul	1,858	28,901	30,759	453,463	37.2
20-Jul	2,019	29,903	31,922	485,385	39.9
21-Jul	1,209	24,631	25,840	511,225	42.0
22-Jul	874	24,445	25,319	536,544	44.1
23-Jul	6,696	28,441	35,137	571,681	47.0
24-Jul	15,308	8,823	24,131	595,812	48.9
25-Jul	3,468	41,538	45,006	640,818	52.6
26-Jul	1,740	59,000	60,740	701,558	57.6
27-Jul	2,702	23,069	25,771	727,329	59.7
28-Jul	10,540	19,715	30,255	757,584	62.2
29-Jul	9,231	13,487	22,718	780,302	64.1
30-Jul	3,904	12,383	16,287	796,589	65.4
31-Jul	1,578	14,645	16,223	812,812	66.8
1-Aug	1,736	45,349	47,085	859,897	70.6
2-Aug	4,812	19,399	24,211	884,108	72.6
3-Aug	879	12,373	13,252	897,360	73.7
4-Aug	2,220	14,951	17,171	914,531	75.1
5-Aug	1,301	16,392	17,693	932,224	76.6
6-Aug	2,062	7,942	10,004	942,228	77.4
7-Aug	3,501	10,750	14,251	956,479	78.6
8-Aug	5,776	9,229	15,005	971,484	79.8
9-Aug	3,701	2,359	6,060	977,544	80.3
10-Aug	1,739	5,010	6,749	984,293	80.8
11-Aug	1,361	7,493	8,854	993,147	81.6
12-Aug	1,359	9,518	10,877	1,004,024	82.5
13-Aug	1,605	9,109	10,714	1,014,738	83.3
14-Aug	1,963	11,115	13,078	1,027,816	84.4
15-Aug	3,944	10,122	14,066	1,041,882	85.6
16-Aug	3,379	6,132	9,511	1,051,393	86.3
17-Aug	2,424	4,082	6,506	1,057,899	86.9
18-Aug	1,793	4,864	6,657	1,064,556	87.4
19-Aug	1,830	6,203	8,033	1,072,589	88.1
20-Aug	1,650	6,631	8,281	1,080,870	88.8
21-Aug	2,314	5,950	8,264	1,089,134	89.4
22-Aug	4,460	2,608	7,068	1,096,202	90.0
23-Aug	1,870	5,717	7,587	1,103,789	90.7
24-Aug	1,738	5,534	7,272	1,111,061	91.2
25-Aug	2,289	6,909	9,198	1,120,259	92.0
26-Aug	2,049	4,242	6,291	1,126,550	92.5
27-Aug	1,003	6,135	7,138	1,133,688	93.1
28-Aug	2,794	2,557	5,351	1,139,039	93.5
29-Aug	1,830	4,330	6,160	1,145,199	94.1

-Continued-

Table 24. (page 3 of 3)

Date	Escapement Counts	Catch[a]	Daily Total	Cumulative Catch and Escapement	Cumulative Percent
30-Aug	1,389	3,772	5,161	1,150,360	94.5
31-Aug	1,817	4,223	6,040	1,156,400	95.0
1-Sep	1,843	1,304	3,147	1,159,547	95.2
2-Sep	1,906	3,138	5,044	1,164,591	95.6
3-Sep	1,229	4,104	5,333	1,169,924	96.1
4-Sep	2,180	4,515	6,695	1,176,619	96.6
5-Sep	2,647	380	3,027	1,179,646	96.9
6-Sep	1,654	4,719	6,373	1,186,019	97.4
7-Sep	1,341	5,311	6,652	1,192,671	98.0
8-Sep	1,028	3,057	4,085	1,196,756	98.3
9-Sep	715	2,962	3,677	1,200,433	98.6
10-Sep	624	762	1,386	1,201,819	98.7
11-Sep	534	0	534	1,202,353	98.7
12-Sep	443	1,351	1,794	1,204,147	98.9
13-Sep	353	2,556	2,909	1,207,056	99.1
14-Sep	207	1,095	1,302	1,208,358	99.2
15-Sep	0	841	841	1,209,199	99.3
16-Sep	0	1,321	1,321	1,210,520	99.4
19-Sep	0	493	493	1,211,013	99.5
20-Sep	0	1,423	1,423	1,212,436	99.6
22-Sep	0	1,746	1,746	1,214,182	99.7
26-Sep	0	54	54	1,214,236	99.7
27-Sep	0	153	153	1,214,389	99.7
28-Sep	0	658	658	1,215,047	99.8
30-Sep	0	485	485	1,215,532	99.8
3-Oct	0	255	255	1,215,787	99.9
5-Oct	0	367	367	1,216,154	99.9
7-Oct	0	619	619	1,216,773	99.9
13-Oct	0	833	833	1,217,606	100.0

[a]Includes 80% of the catches for the entire season from Cape Igvak and Southeastern District Mainland. Does not include catch designated for personal or subsistence use.

Table 25. Black Lake weekly sockeye salmon escapement, by age class, estimated by postseason scale pattern analysis, 1998.

		Age Class													
Week		0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	Total
May 24-May 30	Number	14	0	0	397	0	674	393	4	368	4	0	4	0	1,858
	Percent	0.8	0.0	0.0	21.4	0.0	36.3	21.2	0.2	19.8	0.2	0.0	0.2	0.0	
May 31-Jun 6	Number	62	0	0	1,702	0	2,895	1,687	15	1,579	15	0	15	0	7,970
	Percent	0.8	0.0	0.0	21.4	0.0	36.3	21.2	0.2	19.8	0.2	0.0	0.2	0.0	
Jun 7-Jun 13	Number	467	21	0	13,258	0	22,318	12,946	122	12,915	101	0	164	0	62,312
	Percent	0.7	0.0	0.0	21.3	0.0	35.8	20.8	0.2	20.7	0.2	0.0	0.3	0.0	
Jun 14-Jun 20	Number	457	147	0	25,008	0	51,030	24,140	280	37,533	35	24	673	0	139,327
	Percent	0.3	0.1	0.0	17.9	0.0	36.6	17.3	0.2	26.9	0.0	0.0	0.5	0.0	
Jun 21-Jun 27	Number	338	287	0	24,933	247	55,822	27,347	205	41,986	380	157	646	106	152,454
	Percent	0.2	0.2	0.0	16.4	0.2	36.6	17.9	0.1	27.5	0.2	0.1	0.4	0.1	
Jun 28-Jul 4	Number	30	41	0	1,767	60	4,569	1,785	47	4,466	60	0	128	5	12,958
	Percent	0.2	0.3	0.0	13.6	0.5	35.3	13.8	0.4	34.5	0.5	0.0	1.0	0.0	
Jul 5-Jul 11	Number	0	3	0	248	0	642	476	13	2,706	62	1	6	0	4,157
	Percent	0.0	0.1	0.0	6.0	0.0	15.4	11.5	0.3	65.1	1.5	0.0	0.1	0.0	
Jul 12-Jul 18	Number	0	22	0	639	22	1,670	2,222	13	10,017	432	29	36	0	15,102
	Percent	0.0	0.1	0.0	4.2	0.1	11.1	14.7	0.1	66.3	2.9	0.2	0.2	0.0	
Jul 19-Jul 25	Number	0	34	0	417	34	1,069	2,571	11	6,379	514	22	34	0	11,085
	Percent	0.0	0.3	0.0	3.8	0.3	9.6	23.2	0.1	57.5	4.6	0.2	0.3	0.0	
Jul 26-Aug 1	Number	0	0	0	116	5	361	924	0	1,833	173	9	12	3	3,436
	Percent	0.0	0.0	0.0	3.4	0.1	10.5	26.9	0.0	53.3	5.0	0.3	0.3	0.1	
	Total	1,368	555	0	68,485	368	141,050	74,491	710	119,782	1,776	242	1,718	114	410,659
	Percent	0.3	0.1	0.0	16.7	0.1	34.3	18.1	0.2	29.2	0.4	0.1	0.4	0.0	

Table 26. Chignik Lake weekly sockeye salmon escapement, by age class, estimated by postseason scale pattern analysis, 1998.

Week		Age Class													Total
		0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	
May 24-May 30	Number	1	0	0	18	0	32	18	0	17	0	0	0	0	86
	Percent	1.2	0.0	0.0	20.9	0.0	37.2	20.9	0.0	19.8	0.0	0.0	0.0	0.0	
May 31-Jun 6	Number	6	0	0	153	0	260	152	1	142	1	0	1	0	716
	Percent	0.8	0.0	0.0	21.4	0.0	36.3	21.2	0.1	19.8	0.1	0.0	0.1	0.0	
Jun 7-Jun 13	Number	75	4	0	2,144	0	3,602	2,088	20	2,107	16	0	28	0	10,084
	Percent	0.7	0.0	0.0	21.3	0.0	35.7	20.7	0.2	20.9	0.2	0.0	0.3	0.0	
Jun 14-Jun 20	Number	107	35	0	6,160	0	12,793	5,976	70	9,413	9	7	166	0	34,736
	Percent	0.3	0.1	0.0	17.7	0.0	36.8	17.2	0.2	27.1	0.0	0.0	0.5	0.0	
Jun 21-Jun 27	Number	105	100	0	8,412	101	18,959	9,283	65	14,349	137	47	226	42	51,826
	Percent	0.2	0.2	0.0	16.2	0.2	36.6	17.9	0.1	27.7	0.3	0.1	0.4	0.1	
Jun 28-Jul 4	Number	17	25	0	1,076	36	2,787	1,097	31	2,792	41	0	80	3	7,985
	Percent	0.2	0.3	0.0	13.5	0.5	34.9	13.7	0.4	35.0	0.5	0.0	1.0	0.0	
Jul 5-Jul 11	Number	0	3	0	311	0	813	623	18	3,613	88	2	6	0	5,477
	Percent	0.0	0.1	0.0	5.7	0.0	14.8	11.4	0.3	66.0	1.6	0.0	0.1	0.0	
Jul 12-Jul 18	Number	0	45	0	1,233	45	3,206	4,322	25	19,290	843	56	71	0	29,136
	Percent	0.0	0.2	0.0	4.2	0.2	11.0	14.8	0.1	66.2	2.9	0.2	0.2	0.0	
Jul 19-Jul 25	Number	0	88	0	1,173	88	3,079	7,327	29	18,039	1,454	64	93	0	31,434
	Percent	0.0	0.3	0.0	3.7	0.3	9.8	23.3	0.1	57.4	4.6	0.2	0.3	0.0	
Jul 26-Aug 1	Number	0	0	0	1,053	66	3,170	8,783	0	16,442	1,663	96	127	32	31,432
	Percent	0.0	0.0	0.0	3.4	0.2	10.1	27.9	0.0	52.3	5.3	0.3	0.4	0.1	
Aug 2-Aug 8	Number	0	0	0	540	137	1,465	8,243	32	8,513	1,401	137	62	21	20,551
	Percent	0.0	0.0	0.0	2.6	0.7	7.1	40.1	0.2	41.4	6.8	0.7	0.3	0.1	
Aug 9-Aug 15	Number	0	0	0	287	183	961	7,464	33	5,014	1,530	159	39	2	15,672
	Percent	0.0	0.0	0.0	1.8	1.2	6.1	47.6	0.2	32.0	9.8	1.0	0.2	0.0	

-Continued-

Table 26. (page 2 of 2)

Week		Age Class 0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	Total
Aug 16-Aug 22	Number	0	4	0	290	459	867	9,397	14	4,552	2,135	93	39	0	17,850
	Percent	0.0	0.0	0.0	1.6	2.6	4.9	52.6	0.1	25.5	12.0	0.5	0.2	0.0	
Aug 23-Aug 29	Number	0	13	0	382	324	338	7,466	99	3,109	1,539	241	62	0	13,573
	Percent	0.0	0.1	0.0	2.8	2.4	2.5	55.0	0.7	22.9	11.3	1.8	0.5	0.0	
Aug 30-Sep 12	Number	0	0	0	418	334	306	7,160	139	2,842	1,449	279	84	0	13,011
	Percent	0.0	0.0	0.0	3.2	2.6	2.4	55.0	1.1	21.8	11.1	2.1	0.6	0.0	
Sep 13-Sep 19	Number	0	0	0	204	163	149	3,488	68	1,384	706	136	41	0	6,339
	Percent	0.0	0.0	0.0	3.2	2.6	2.4	55.0	1.1	21.8	11.1	2.1	0.6	0.0	
Sep 20-Sep 26	Number	0	0	0	18	14	13	309	6	123	62	12	4	0	561
	Percent	0.0	0.0	0.0	3.2	2.5	2.3	55.1	1.1	21.9	11.1	2.1	0.7	0.0	
	Total	311	317	0	23,872	1,950	52,800	83,196	650	111,741	13,074	1,329	1,129	100	290,469
	Percent	0.1	0.1	0.0	8.2	0.7	18.2	28.6	0.2	38.5	4.5	0.5	0.4	0.0	

Table 27. Black Lake weekly sockeye salmon catch, by age class, estimated by postseason scale pattern analysis, 1998.

Week		Age Class [a,b,c] 0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	Total
Jun 7-Jun 13	Number	26	1	0	715	0	1,209	704	7	680	6	0	8	0	3,356
	Percent	0.8	0.0	0.0	21.3	0.0	36.0	21.0	0.2	20.3	0.2	0.0	0.2	0.0	
Jun 14-Jun 20	Number	12	4	0	1,512	0	3,611	1,509	19	2,655	1	1	41	0	9,365
	Percent	0.1	0.0	0.0	16.1	0.0	38.6	16.1	0.2	28.4	0.0	0.0	0.4	0.0	
Jun 21-Jun 27	Number	4	6	0	519	8	1,163	594	2	876	10	2	13	4	3,201
	Percent	0.1	0.2	0.0	16.2	0.2	36.3	18.6	0.1	27.4	0.3	0.1	0.4	0.1	
Jun 28-Jul 4	Number	110	168	0	7,103	219	18,705	7,343	272	21,289	387	0	604	0	56,200
	Percent	0.2	0.3	0.0	12.6	0.4	33.3	13.1	0.5	37.9	0.7	0.0	1.1	0.0	
Jul 5-Jul 11	Number	0	48	0	4,025	6	10,413	7,684	213	43,693	1,003	18	90	0	67,193
	Percent	0.0	0.1	0.0	6.0	0.0	15.5	11.4	0.3	65.0	1.5	0.0	0.1	0.0	
Jul 12-Jul 18	Number	0	170	0	3,194	170	7,977	12,169	63	49,516	2,435	152	209	0	76,055
	Percent	0.0	0.2	0.0	4.2	0.2	10.5	16.0	0.1	65.1	3.2	0.2	0.3	0.0	
Jul 19-Jul 25	Number	0	310	0	2,897	310	6,610	16,761	103	43,209	3,489	151	255	0	74,095
	Percent	0.0	0.4	0.0	3.9	0.4	8.9	22.6	0.1	58.3	4.7	0.2	0.3	0.0	
Jul 26-Aug 1	Number	0	0	0	811	12	2,687	6,042	0	13,184	1,105	54	60	6	23,961
	Percent	0.0	0.0	0.0	3.4	0.1	11.2	25.2	0.0	55.0	4.6	0.2	0.3	0.0	
	Total	152	707	0	20,776	725	52,375	52,806	679	175,102	8,436	378	1,280	10	313,426
	Percent	0.0	0.2	0.0	6.6	0.2	16.7	16.8	0.2	55.9	2.7	0.1	0.4	0.0	

[a]Includes 80% of the catches for the entire season from Cape Igvak and Southeastern District Mainland.

[b]Does not include catch designated for personal or subsistence use.

[c]Includes catches from the Chignik Lagoon test fishery.

Table 28. Chignik Lake weekly sockeye salmon catch, by age class, estimated by postseason scale pattern analysis, 1998.

Week		Age Class [a,b] 0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	Total
Jun 7-Jun 13	Number	4	0	0	117	0	199	115	1	112	1	0	1	0	550
	Percent	0.7	0.0	0.0	21.3	0.0	36.2	20.9	0.2	20.4	0.2	0.0	0.2	0.0	
Jun 14-Jun 20	Number	3	1	0	393	0	950	393	5	698	0	0	11	0	2,454
	Percent	0.1	0.0	0.0	16.0	0.0	38.7	16.0	0.2	28.4	0.0	0.0	0.4	0.0	
Jun 21-Jun 27	Number	1	2	0	187	3	421	216	1	319	4	1	5	2	1,162
	Percent	0.1	0.2	0.0	16.1	0.3	36.2	18.6	0.1	27.5	0.3	0.1	0.4	0.2	
Jun 28-Jul 4	Number	72	117	0	4,995	149	13,131	5,235	194	15,257	287	0	424	0	39,861
	Percent	0.2	0.3	0.0	12.5	0.4	32.9	13.1	0.5	38.3	0.7	0.0	1.1	0.0	
Jul 5-Jul 11	Number	0	52	0	5,024	6	13,097	9,986	293	57,916	1,405	28	103	0	87,910
	Percent	0.0	0.1	0.0	5.7	0.0	14.9	11.4	0.3	65.9	1.6	0.0	0.1	0.0	
Jul 12-Jul 18	Number	0	343	0	6,328	343	15,765	24,215	125	98,026	4,852	303	417	0	150,717
	Percent	0.0	0.2	0.0	4.2	0.2	10.5	16.1	0.1	65.0	3.2	0.2	0.3	0.0	
Jul 19-Jul 25	Number	0	715	0	7,214	715	17,070	42,562	238	108,417	8,752	380	619	0	186,682
	Percent	0.0	0.4	0.0	3.9	0.4	9.1	22.8	0.1	58.1	4.7	0.2	0.3	0.0	
Jul 26-Aug 1	Number	0	0	0	6,248	377	19,075	52,412	13	98,263	9,819	571	701	169	187,648
	Percent	0.0	0.0	0.0	3.3	0.2	10.2	27.9	0.0	52.4	5.2	0.3	0.4	0.1	
Aug 2-Aug 8	Number	0	0	0	2,491	567	6,726	35,217	119	38,833	6,099	567	313	104	91,036
	Percent	0.0	0.0	0.0	2.7	0.6	7.4	38.7	0.1	42.7	6.7	0.6	0.3	0.1	
Aug 9-Aug 15	Number	0	0	0	938	719	3,387	26,085	116	17,119	5,604	607	149	2	54,726
	Percent	0.0	0.0	0.0	1.7	1.3	6.2	47.7	0.2	31.3	10.2	1.1	0.3	0.0	
Aug 16-Aug22	Number	0	4	0	555	998	1,822	19,139	15	9,358	4,355	153	71	0	36,470
	Percent	0.0	0.0	0.0	1.5	2.7	5.0	52.5	0.0	25.7	11.9	0.4	0.2	0.0	
Aug 23-Aug29	Number	0	36	0	975	855	898	19,464	246	8,163	4,021	611	155	0	35,424
	Percent	0.0	0.1	0.0	2.8	2.4	2.5	54.9	0.7	23.0	11.4	1.7	0.4	0.0	

-Continued-

Table 28. (page 2 of 2)

Week		Age Class 0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	Total
Aug 30-Sep 12	Number	0	0	0	689	551	505	11,797	230	4,680	2,387	459	138	0	21,436
	Percent	0.0	0.0	0.0	3.2	2.6	2.4	55.0	1.1	21.8	11.1	2.1	0.6	0.0	
Sep 13-Sep 19	Number	0	0	0	583	467	428	9,995	194	3,967	2,022	389	117	0	18,162
	Percent	0.0	0.0	0.0	3.2	2.6	2.4	55.0	1.1	21.8	11.1	2.1	0.6	0.0	
Sep 20-Sep26	Number	0	0	0	203	162	149	3,470	68	1,376	702	135	41	0	6,306
	Percent	0.0	0.0	0.0	3.2	2.6	2.4	55.0	1.1	21.8	11.1	2.1	0.7	0.0	
Sep 27-Oct 3	Number	0	0	0	104	83	76	1,774	35	702	359	69	21	0	3,223
	Percent	0.0	0.0	0.0	3.2	2.6	2.4	55.0	1.1	21.8	11.1	2.1	0.7	0.0	
Oct 4-Oct10	Number	0	0	0	50	40	37	854	17	337	173	33	10	0	1,551
	Percent	0.0	0.0	0.0	3.2	2.6	2.4	55.1	1.1	21.7	11.2	2.1	0.6	0.0	
Oct 11-Oct 13	Number	0	0	0	58	47	43	1,001	19	397	203	39	12	0	1,819
	Percent	0.0	0.0	0.0	3.2	2.6	2.4	55.0	1.0	21.8	11.2	2.1	0.7	0.0	
	Total	80	1,270	0	37,152	6,082	93,779	263,930	1,929	463,940	51,045	4,345	3,308	277	927,137
	Percent	0.0	0.1	0.0	4.0	0.7	10.1	28.5	0.2	50.0	5.5	0.5	0.4	0.0	

[a] Includes 80% of the catches for the entire season from Cape Igvak and Southeastern District Mainland.

[b] Does not include catch designated for personal or subsistence use.

[c] Includes catches from the Chignik Lagoon test fishery.

Table 29. Black Lake and Chignik Lake sockeye salmon escapement, catch, and total run estimates, by age class, based on postseason scale pattern analysis, 1998.

	Age Class [a,b,c]													
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	Total
Black Lake														
Escapement	1,368	555	0	68,485	368	141,050	74,491	710	119,782	1,776	242	1,718	114	410,659
Catch	152	707	0	20,776	725	52,375	52,806	679	175,102	8,436	378	1,280	10	313,426
Run	1,520	1,262	0	89,261	1,093	193,425	127,297	1,389	294,884	10,212	620	2,998	124	724,085
Percent	0.2	0.2	0.0	12.3	0.2	26.7	17.6	0.2	40.7	1.4	0.1	0.4	0.0	100.0
Chignik Lake														
Escapement	311	317	0	23,872	1,950	52,800	83,196	650	111,741	13,074	1,329	1,129	100	290,469
Catch	80	1,270	0	37,152	6,082	93,779	263,930	1,929	463,940	51,045	4,345	3,308	277	927,137
Run	391	1,587	0	61,024	8,032	146,579	347,126	2,579	575,681	64,119	5,674	4,437	377	1,217,606
Percent	0.0	0.1	0.0	5.0	0.7	12.0	28.5	0.2	47.3	5.3	0.5	0.4	0.0	100.0
Total Run														
Escapement	1,679	872	0	92,357	2,318	193,850	157,687	1,360	231,523	14,850	1,571	2,847	214	701,128
Catch	232	1,977	0	57,928	6,807	146,154	316,736	2,608	639,042	59,481	4,723	4,588	287	1,240,563
Run	1,911	2,849	0	150,285	9,125	340,004	474,423	3,968	870,565	74,331	6,294	7,435	501	1,941,691
Percent	0.1	0.1	0.0	7.7	0.5	17.5	24.4	0.2	44.8	3.8	0.3	0.4	0.0	100.0

[a]Includes 80% of the catches for the entire season from Cape Igvak and Southeastern District Mainland.

[b]Does not include catch designated for personal or subsistence use.

[c]Includes catches from the Chignik Lagoon test fishery.

Table 30. Sockeye salmon escapement, catch, and total run for the Black Lake, Chignik Lake, and combined runs, based on postseason scale pattern analysis, 1954-1998.

	Escapement and Catch[a,b,c]								
	Black Lake			Chignik Lake			Combined		
Year	Escapement	Catch	Total	Escapement	Catch	Total	Escapement	Catch	Total
1954	184,953	72,334	257,287	277,912	19,232	297,144	462,865	91,566	554,431
1955	256,757	179,539	436,296	201,409	168,987	370,396	458,166	348,526	806,692
1956	289,096	246,442	535,538	483,024	421,251	904,275	772,120	667,693	1,439,813
1957	192,479	77,423	269,902	328,779	224,757	553,536	521,258	302,180	823,438
1958	120,862	141,180	262,042	212,594	179,949	392,543	333,456	321,129	654,585
1959	112,226	165,000	277,226	308,645	251,547	560,192	420,871	416,547	837,418
1960	251,567	274,048	525,615	357,230	418,356	775,586	608,797	692,404	1,301,201
1961	140,714	53,852	194,566	254,970	278,609	533,579	395,684	332,461	728,145
1962	167,602	71,562	239,164	324,860	292,528	617,388	492,462	364,090	856,552
1963	332,536	80,258	412,794	200,314	323,080	523,394	532,850	403,338	936,188
1964	137,073	142,380	279,453	166,625	472,510	639,135	303,698	614,890	918,588
1965	307,192	497,018	804,210	163,151	169,576	332,727	470,343	666,594	1,136,937
1966	383,545	87,169	470,714	183,525	162,638	346,163	567,070	249,807	816,877
1967	328,000	154,134	482,134	189,000	350,901	539,901	517,000	505,035	1,022,035
1968	342,343	542,598	884,941	244,836	641,693	886,529	587,179	1,184,291	1,771,470
1969	366,589	263,170	629,759	132,055	235,960	368,015	498,644	499,130	997,774
1970	536,257	1,566,065	2,102,322	119,952	262,244	382,196	656,209	1,828,309	2,484,518
1971	671,668	555,832	1,227,500	232,501	709,190	941,691	904,169	1,265,022	2,169,191
1972	326,320	43,220	369,540	231,270	386,615	617,885	557,590	429,835	987,425
1973	533,047	569,854	1,102,901	247,144	396,114	643,258	780,191	965,968	1,746,159
1974	351,701	174,883	526,584	364,612	675,607	1,040,219	716,313	850,490	1,566,803
1975	308,914	4,019	312,933	314,084	421,414	735,498	622,998	425,433	1,048,431
1976	551,254	548,107	1,099,361	341,828	778,380	1,120,208	893,082	1,326,487	2,219,569
1977	482,247	439,693	921,940	463,561	1,696,767	2,160,328	945,808	2,136,460	3,082,268
1978	458,660	1,070,487	1,529,147	263,009	754,838	1,017,847	721,669	1,825,325	2,546,994
1979	385,694	207,122	592,816	317,889	944,964	1,262,853	703,583	1,152,086	1,855,669
1980	311,332	170,629	481,961	279,729	778,014	1,057,743	591,061	948,643	1,539,704
1981	438,540	779,755	1,218,295	301,092	1,509,959	1,811,051	739,632	2,289,714	3,029,346
1982	616,117	1,325,041	1,941,158	305,193	451,789	756,982	921,310	1,776,830	2,698,140
1983	426,177	977,548	1,403,725	441,561	1,467,060	1,908,621	867,738	2,444,608	3,312,346
1984	597,712	3,245,482	3,843,194	268,496	353,141	621,637	866,208	3,598,623	4,464,831
1985	377,516	650,340	1,027,856	369,262	490,151	859,413	746,778	1,140,491	1,887,269
1986	566,088	1,371,935	1,938,023	207,231	609,084	816,315	773,319	1,981,019	2,754,338
1987	589,291	1,949,867	2,539,158	214,452	482,311	696,763	803,743	2,432,178	3,235,921
1988	420,577	272,553	693,130	255,180	631,172	886,352	675,757	903,725	1,579,482
1989	384,004	234,839	618,843	557,171	1,063,042	1,620,213	941,175	1,297,881	2,239,056
1990	434,543	587,818	1,022,361	335,867	1,856,597	2,192,464	770,410	2,444,415	3,214,825
1991	657,511	1,714,835	2,372,346	382,587	751,291	1,133,878	1,040,098	2,466,126	3,506,224
1992	360,681	747,829	1,108,510	405,922	863,651	1,269,573	766,603	1,611,480	2,378,083
1993	364,263	926,863	1,291,126	333,114	1,322,984	1,656,098	697,377	2,249,847	2,947,224
1994	769,464	1,595,256	2,364,720	197,445	508,109	705,554	966,909	2,103,365	3,070,274
1995	366,163	660,282	1,026,445	373,757	1,522,406	1,896,163	739,920	2,182,688	2,922,608
1996	464,750	1,705,642	2,170,392	284,387	745,575	1,029,962	749,137	2,451,217	3,200,354
1997	396,668	234,612	631,280	378,950	608,484	987,434	775,618	843,096	1,618,714
1998	410,659	313,426	724,085	290,469	927,137	1,217,606	701,128	1,240,563	1,941,691
Average									
68-77	447,034	470,744	917,778	269,184	620,398	889,583	716,218	1,091,143	1,807,361
78-87	476,713	1,174,821	1,651,533	296,791	784,131	1,080,923	773,504	1,958,952	2,732,456
88-97	461,862	868,053	1,329,915	350,438	987,331	1,337,769	812,300	1,855,384	2,667,684

[a]Includes 80% of the catches for the entire season from Cape Igvak and Southeast District Mainland.

[b]Does not include personal use or other subsistence fish.

[c]Includes catches from the Chignik Lagoon test fishery.

Table 31. Black Lake and Black River tributaries peak aerial sockeye salmon survey escapement estimates, 1960-1998.

	Black Lake[a]							Black River				Chignik Lake		
Year	Fan Creek	Milk Creek	Boulevard Creek	Alec River	Conglomerate	Broad Creek	Total	Bearskin Creek	West Fork	Chiaktuak Creek	Total	Clark River	Home Creek	Hatchery Beach
1960	38,500	8,000	40,000	30,000	3,000	30,000	149,500	11,600	23,000	19,000	53,600			
1961	27,000	5,000	28,700	25,000	800	17,000	103,500	2,500	17,100	20,700	40,300			
1962	18,000	7,000	13,000	60,000	200	15,000	113,200	3,000	13,000	24,000	40,000			
1963	39,000	-	36,000	85,000	1,000	61,000	222,000	900	5,000	9,000	14,900			
1964	19,500	3,050	23,850	17,900	9,300	9,500	83,100	500	4,500	7,000	12,000			
1967	20,000	1,000	9,000	156,000	10,000	10,000	206,000	10,000	25,000	31,000	66,000			
1968	32,000	2,400	20,000	60,000	2,000	4,100	120,500	1,200	10,500	10,000	21,700			
1969	103,000	2,100	33,000	50,000	4,000	5,000	197,100	50	800	1,500	2,350			
1970	146,000	9,000	55,500	198,000	5,000	-	413,500	450	4,000	4,000	8,450			
1971	105,000	14,000	85,000	158,000	0	-	362,000	3,500	5,500	47,000	56,000			
1972	18,000	3,500	19,000	74,000	400	-	114,900	1,400	4,300	23,000	28,700			
1973	115,000	4,000	76,000	74,000	5,000	-	274,000	13	4,100	1,500	5,613			
1974	90,000	5,000	50,000	93,000	5,000	-	243,000	450	8,000	7,000	15,450			
1975	40,000	4,500	25,000	87,000	0	-	156,500	65	2,500	2,500	5,065			
1976	78,000	8,900	100,000	119,000	2,000	-	307,900	2,650	23,700	7,700	34,050			
1977	88,000	20,000	127,000	133,000	1,000	-	369,000	200	13,600	6,900	20,700			
1978	114,000	3,300	74,000	83,300	500	-	275,100	410	9,600	8,500	18,510			
1979	37,000	11,800	32,000	105,100	400	26,100	212,400	918	7,610	29,000	37,528			
1980	127,000	16,000	75,000	70,500	1,500	68,000	358,000	3,600	33,000	40,400	77,000			
1981	93,000	4,700	59,000	76,500	20,000	27,000	280,200	950	1,500	18,700	21,150			
1982	50,000	5,500	60,000	43,000	20,000	32,000	210,500	1,066	10,791	5,000	16,857			
1983	-	-	-	-	-	-	-	-	-	6,000	6,000			
1984	50,000	22,200	70,000	30,500	31,000	36,000	239,700	-	-	-	8,200			
1985	28,000	5,500	36,000	65,000	5,500	17,000	157,000	350	450	1,200	2,000			
1986	60,000	15,300	47,000	76,000	39,000	27,000	264,300	-	-	8,300	8,300			
1987	52,000	12,200	133,000	88,400	45,900	32,500	364,000	-	-	1,000	1,000			
1988	54,000	71,000	83,700	106,500	2,300	26,500	344,000	-	-	4,600	4,600			
1989	19,300	21,000	64,000	133,000	1,000	7,500	245,800	-	-	2,100	2,100			
1990	32,600	7,400	35,900	49,800	2,200	18,000	145,900	300	0	50	350			

-Continued-

Table 31. (page 2 of 2)

	Black Lake[a]							Black River				Chignik Lake		
Year	Fan Creek	Milk Creek	Boulevard Creek	Alec River	Conglomerate	Broad Creek	Total	Bearskin Creek	West Fork	Chiaktuak Creek	Total	Clark River	Home Creek	Hatchery Beach
1991	14,600	19,500	48,000	-	2,000	13,000	97,100	-	-	-	-			
1992[b]	-	-	-	392,000	-	-	-	-	-	-	-			
1993	40,900	12,600	97,600	8,000	77,000	18,200	254,300	-	-	16,000	16,000			
1994	70,000	25,000	125,000	350,000	20,000	51,000	641,000	5,000	-	31,000	36,000	18,000	9,200	-
1995	23,000	10,000	60,000	200,000	40,000	60,000	393,000	7,100	18,000	31,000	56,100	13,000	6,000	150,000
1996	40,000	24,000	51,000	100,000	50,000	45,000	310,000	1,800	22,000	22,000	45,800	13,000	5,500	70,000
1997	60,000	5,000	48,000	166,000	8,000	20,000	307,000	9,000	9,000	23,500	41,500	25,000	8,000	35,000
1998	90,000	14,000	100,000	50,000	9,000	62,000	325,000	4,700	71,000	27,500	103,200	21,000	6,000	62,000

[a]Dashes or blanks represent no surveys taken or survey results not adequate to make stream estimate.

[b]Survey considered incomplete for all streams except the Alec River.

Table 32. Pink salmon catch, escapement, and run numbers (in thousands of fish) in the Chignik Bay District, 1962-1998.

Year	Catch[a]	Escapement[b]	Run	Year	Catch	Escapement[c]	Run
1962	36.7	30.0	66.7	1981	121.4	1.4	122.8
1963	63.7	20.7	84.4	1982	83.0	2.4	85.4
1964	123.6	20.0	143.6	1983	27.3	1.0	28.3
1965	31.5	11.0	42.5	1984	165.2	123.2	288.4
1966	18.3	71.3	89.6	1985	14.4	0.0	14.4
1967	27.4	5.7	33.1	1986	191.3	0.0	191.3
1968	230.2	81.4	311.6	1987	13.9	0.0	13.9
1969	29.5	11.7	41.2	1988	119.8	22.4	142.2
1970	46.3	43.6	89.9	1989	27.7	13.5	41.2
1971	65.3	5.5	70.8	1990	94.5	6.0	100.5
1972	31.6	5.8	37.4	1991	76.2	12.2	88.4
1973	22.7	2.2	24.9	1992	178.2	55.8	234.0
1974	33.5	4.0	37.5	1993	55.9	2.0	57.9
1975	27.4	1.2	28.6	1994	59.4	75.8	135.2
1976	108.8	12.3	121.1	1995	106.9	180.5	287.4
1977	60.9	3.0	63.9	1996	1.5	43.1	44.6
1978	137.1	10.7	147.8	1997	39.5	59.4	98.9
1979	312.4	1.2	313.6	1998	26.1	24.4	50.5
1980	180.9	3.0	183.9				
Average 88-97	76.0	47.1	123.0				

[a]Catches (1970-1998) were updated using historical electronic fish ticket databases. Personal use or other subsistence fish not included.

[b]Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to last day of stream entry.

[c]Chignik River escapement was incompletely monitored all years before 1996. Pink salmon escapement was counted through the weir until September 4, from 1996 -1998.

Table 33. Pink salmon catch, escapement, and run numbers (in thousands of fish) in the Central District, 1962-1998.

Year	Catch[a]	Escapement[b]	Run	Year	Catch	Escapement	Run
1962	84.3	83.9	168.2	1981	210.0	76.5	286.5
1963	121.3	92.6	213.9	1982	80.6	26.1	106.7
1964	71.9	131.1	203.0	1983	7.9	11.0	18.9
1965	69.5	65.8	135.3	1984	47.3	94.0	141.3
1966	17.4	62.6	80.0	1985	16.1	7.4	23.5
1967	26.0	18.5	44.5	1986	44.1	121.9	166.0
1968	45.4	66.1	111.5	1987	7.8	65.7	73.5
1969	1.4	69.6	71.0	1988	318.4	216.4	534.8
1970	27.9	60.7	88.6	1989	0.0	215.0	215.0
1971	20.5	74.8	95.3	1990	233.7	131.9	365.6
1972	0.8	3.1	3.9	1991	174.0	201.1	375.1
1973	0.3	50.2	50.5	1992	205.7	223.8	429.5
1974	22.1	9.8	31.9	1993	198.5	160.9	359.4
1975	31.3	26.4	57.7	1994	99.1	178.9	278.0
1976	16.6	66.0	82.6	1995	469.7	715.5	1,185.2
1977	120.0	199.9	319.9	1996	15.8	237.1	252.9
1978	61.2	101.2	162.4	1997	600.0	594.6	1,194.6
1979	284.4	297.0	581.4	1998	233.7	210.9	444.6
1980	108.7	99.4	208.1				
Average 88-97	231.5	287.5	519.0				

[a] Catches (1970-1998) were updated using historical electronic fish ticket databases. Personal use or other subsistence fish are not included.

[b] Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett 1988). September 15 was the assumed to be the last day of stream entry.

Table 34. Pink salmon catch, escapement, and run numbers (in thousands of fish) in the Eastern District, 1962-1998.

Year	Catch[a]	Escapement[b]	Run	Year	Catch	Escapement	Run
1962	1,109.9	401.7	1,511.6	1981	173.3	154.7	328.0
1963	26.9	126.2	153.1	1982	89.1	301.5	390.6
1964	1,251.5	605.7	1,857.2	1983	7.8	46.3	54.1
1965	25.7	64.8	90.5	1984	57.7	486.5	544.2
1966	386.2	302.2	688.4	1985	6.6	212.1	218.7
1967	22.6	56.1	78.7	1986	49.6	580.7	630.3
1968	523.4	390.3	913.7	1987	2.1	215.6	217.7
1969	1.7	46.0	47.7	1988	1,006.4	1,005.4	2,011.8
1970	268.9	201.7	470.6	1989	0.0	881.0	881.0
1971	29.0	23.0	52.0	1990	40.6	811.4	852.0
1972	12.9	15.9	28.8	1991	28.0	125.0	153.0
1973	2.5	12.8	15.3	1992	183.1	1,318.1	1,501.2
1974	0.6	76.2	76.8	1993	59.3	524.7	584.0
1975	0.0	23.5	23.5	1994	13.0	863.3	876.3
1976	28.8	228.8	257.6	1995	8.6	1,399.3	1,407.9
1977	0.2	76.0	76.2	1996	7.2	1,059.6	1,066.8
1978	86.8	309.3	396.1	1997	72.3	1,287.7	1,360.0
1979	292.4	194.3	486.7	1998	66.7	1273.2	1,339.9
1980	472.5	425.5	898.0				
Average 88-97	141.9	927.6	1069.4				

[a]Catches (1970-1998) were updated using historical electronic fish ticket databases. Personal use or other subsistence fish not included.

[b]Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to be the last day of stream entry.

Table 35. Pink salmon catch, escapement, and run numbers (in thousands of fish) in the Western District, 1962-1998.

Year	Catch[a]	Escapement[b]	Run	Year	Catch	Escapement	Run
1962	81.0	242.0	323.0	1981	433.6	249.3	682.9
1963	516.9	305.0	821.9	1982	602.4	45.9	648.3
1964	112.9	165.0	277.9	1983	164.3	36.0	200.3
1965	345.6	152.0	497.6	1984	173.8	188.0	361.8
1966	173.2	179.3	352.5	1985	80.6	67.5	148.1
1967	27.1	104.4	131.5	1986	200.8	43.8	244.6
1968	295.6	151.3	446.9	1987	187.7	38.3	226.0
1969	485.0	422.0	907.0	1988	1,141.4	232.4	1,373.8
1970	442.7	202.0	644.7	1989	0.0	57.9	57.9
1971	285.4	268.8	554.2	1990	135.8	44.3	180.1
1972	14.9	8.6	23.5	1991	419.3	96.8	516.1
1973	0.0	62.4	62.4	1992	628.9	38.8	667.7
1974	13.4	77.4	90.8	1993	685.6	45.8	731.4
1975	7.4	141.7	149.1	1994	174.6	111.6	286.2
1976	135.8	114.2	250.0	1995	791.7	554.7	1,346.4
1977	379.0	355.5	734.5	1996	100.9	220.8	321.7
1978	419.3	333.4	752.7	1997	118.9	306.3	425.2
1979	744.6	185.0	929.6	1998	343.2	150.4	493.6
1980	216.5	139.5	356.0				
Average 88-97	419.7	170.9	590.7				

[a]Catches (1970-1998) were updated using historical electronic fish ticket databases. Personal use or other subsistence fish not included.

[b]Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to be the last day of stream entry.

Table 36. Pink salmon catch, escapement, and run numbers (in thousands of fish) in the Perryville District, 1962-1998.

Year	Catch[a]	Escapement[b]	Run	Year	Catch	Escapement	Run
1962	207.4	155.5	362.9	1981	224.3	116.0	340.3
1963	933.6	162.0	1,095.6	1982	18.3	13.4	31.7
1964	122.6	72.0	194.6	1983	113.9	64.5	178.4
1965	644.8	82.0	726.8	1984	0.8	109.8	110.6
1966	88.2	90.0	178.2	1985	42.5	235.2	277.7
1967	5.2	155.3	160.5	1986	161.3	180.5	341.8
1968	196.1	128.7	324.8	1987	35.3	65.7	101.0
1969	1,262.2	218.6	1,480.8	1988	411.2	181.3	592.5
1970	371.4	72.6	444.0	1989	0.0	267.4	267.4
1971	212.1	45.0	257.1	1990	45.4	88.4	133.8
1972	12.0	7.8	19.8	1991	471.9	343.5	815.4
1973	0.0	31.5	31.5	1992	358.2	190.4	548.6
1974	0.0	60.2	60.2	1993	649.1	448.4	1,097.5
1975	0.0	45.3	45.3	1994	84.9	153.9	238.8
1976	105.2	89.3	194.5	1995	681.0	582.1	1,263.1
1977	44.6	115.4	160.0	1996	58.5	395.7	454.2
1978	280.8	157.5	438.3	1997	13.8	221.5	235.3
1979	271.4	181.3	452.7	1998	107.3	222.8	330.1
1980	114.6	74.8	189.4				
Average 88-97	277.4	287.3	564.7				

[a]Catches (1970-1998) were updated using historical electronic fish ticket databases. Personal use or other subsistence fish not included.

[b]Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to be the last day of stream entry.

Table 37. Total pink salmon catch, escapement, and run numbers (in thousands of fish) in the Chignik Management Area, 1962-1998.

Year	Catch[a]	Escapement[b]	Run	Year	Catch	Escapement	Run
1962	1,519.3	913.1	2,432.4	1981	1,162.6	597.9	1,760.5
1963	1,662.4	706.5	2,368.9	1982	873.4	389.3	1,262.7
1964	1,682.5	993.8	2,676.3	1983	321.2	158.8	480.0
1965	1,117.1	375.6	1,492.7	1984	444.8	1,001.5	1,446.3
1966	683.3	705.4	1,388.7	1985	160.1	522.2	682.3
1967	108.3	340.0	448.3	1986	647.1	926.9	1,574.0
1968	1,290.7	817.8	2,108.5	1987	246.8	385.3	632.1
1969	1,779.8	767.9	2,547.7	1988	2,997.2	1,657.9	4,655.1
1970	1,157.2	580.6	1,737.8	1989	27.7	1,434.8	1,462.5
1971	612.3	417.1	1,029.4	1990	550.0	1,082.0	1,632.0
1972	72.2	41.2	113.4	1991	1,169.2	778.6	1,947.8
1973	25.5	159.1	184.6	1992	1,554.1	1,826.9	3,381.0
1974	69.6	227.6	297.2	1993	1,648.4	1,181.8	2,830.2
1975	66.2	238.1	304.3	1994	431.1	1,383.5	1,814.6
1976	395.3	510.6	905.9	1995	2,058.0	3,432.0	5,490.0
1977	604.8	749.8	1,354.6	1996	183.8	1,956.4	2,140.2
1978	985.1	912.1	1,897.3	1997	844.4	2,469.5	3,313.9
1979	1,905.2	858.8	2,764.0	1998	777.0	1881.8	2,658.8
1980	1,093.2	742.2	1,835.4				
				Average 88-97	1,146.4	1,720.3	2,866.7

[a]Catches (1970-1998) were updated using historical electronic fish ticket databases. Personal use or other subsistence fish not included.

[b]Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to be the last day of stream entry.

Table 38. Chum salmon catch, escapement, and run numbers (in thousands of fish) in the Chignik Bay District, 1962-1998.

Year	Catch[a]	Escapement[b]	Run	Year	Catch	Escapement	Run
1962	5.2	6.7	11.9	1981	38.1	0.5	38.6
1963	5.3	0.8	6.1	1982	16.0	1.4	17.4
1964	8.5	2.5	11.0	1983	16.7	0.1	16.8
1965	1.2	3.0	4.2	1984	8.2	0.3	8.5
1966	6.6	4.5	11.1	1985	4.9	0.0	4.9
1967	5.9	4.0	9.9	1986	18.2	0.0	18.2
1968	5.4	1.0	6.4	1987	5.2	0.1	5.3
1969	2.9	1.5	4.4	1988	7.0	15.3	22.3
1970	1.7	21.0	22.7	1989	1.6	4.2	5.8
1971	19.4	7.1	26.5	1990	11.5	1.5	13.0
1972	18.2	3.3	21.5	1991	17.5	0.0	17.5
1973	7.3	0.7	8.0	1992	12.7	0.1	12.8
1974	17.3	2.1	19.4	1993	8.1	0.3	8.4
1975	21.2	2.1	23.3	1994	25.3	1.5	26.8
1976	19.2	2.4	21.6	1995	14.6	10.3	24.9
1977	8.6	2.0	10.6	1996	0.6	16.4	17.0
1978	15.0	2.1	17.1	1997	21.0	18.5	39.5
1979	32.2	1.6	33.8	1998	7.4	4.5	11.9
1980	19.9	0.3	20.2				
Average 88-97	12.0	6.8	18.8				

[a]Catches (1970-1998) were updated using historical electronic fish ticket databases. Personal use or other subsistence fish not included.

[b]Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to be the last day of stream entry.

Table 39. Chum salmon catch, escapement, and run numbers (in thousands of fish) in the Central District, 1962-1998.

Year	Catch[a]	Escapement[b]	Run	Year	Catch	Escapement	Run
1962	132.0	40.4	172.4	1981	160.7	26.1	186.8
1963	23.1	34.0	57.1	1982	33.7	49.4	83.1
1964	50.3	24.2	74.5	1983	9.8	17.0	26.8
1965	37.8	19.2	57.0	1984	8.2	35.4	43.6
1966	20.9	10.0	30.9	1985	5.2	9.6	14.8
1967	9.9	17.2	27.1	1986	29.5	31.0	60.5
1968	4.2	14.5	18.7	1987	9.4	17.5	26.9
1969	3.2	6.5	9.7	1988	39.3	55.8	95.1
1970	28.6	23.4	52.0	1989	0.0	34.7	34.7
1971	13.7	29.1	42.9	1990	113.7	28.0	141.7
1972	1.6	14.2	15.8	1991	51.4	18.0	69.4
1973	0.2	12.2	14.4	1992	45.5	173.1	218.6
1974	13.5	18.1	31.6	1993	43.0	39.4	82.4
1975	3.2	18.8	22.0	1994	69.6	102.6	172.2
1976	3.4	17.8	21.2	1995	107.1	44.5	151.6
1977	8.9	9.3	18.2	1996	26.1	45.1	71.2
1978	10.3	13.8	24.1	1997	103.4	65.7	169.1
1979	11.4	44.8	56.2	1998	43.0	32.0	75.0
1980	38.9	34.2	73.1				
Average 88-97	59.9	60.7	120.6				

[a]Catches (1970-1998) were updated using historical electronic fish ticket databases. Personal use or other subsistence fish not included.

[b]Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to be the last day of stream entry.

Table 40. Chum salmon catch, escapement, and run numbers (in thousands of fish) in the Eastern District, 1962-1998.

Year	Catch[a]	Escapement[b]	Run	Year	Catch	Escapement	Run
1962	74.7	79.6	154.3	1981	108.7	126.0	234.7
1963	20.5	55.2	75.7	1982	64.5	145.4	209.9
1964	242.7	165.4	408.1	1983	8.3	50.2	58.5
1965	32.4	58.0	90.4	1984	21.1	214.7	235.8
1966	130.1	58.0	188.1	1985	0.9	4.9	5.8
1967	24.4	89.8	114.2	1986	17.9	8.5	26.4
1968	110.1	63.0	173.1	1987	8.9	38.3	47.2
1969	3.7	66.5	70.2	1988	77.5	221.9	299.4
1970	241.1	126.0	367.1	1989	0.0	74.3	74.3
1971	102.3	219.2	321.5	1990	27.5	139.7	167.2
1972	27.7	107.4	135.1	1991	4.9	70.4	75.3
1973	1.2	59.1	60.3	1992	61.2	306.9	368.1
1974	0.3	76.3	76.5	1993	21.4	135.2	156.6
1975	0.0	41.3	41.3	1994	4.3	129.2	133.5
1976	10.0	122.3	132.3	1995	8.0	112.8	120.8
1977	1.5	54.5	56.0	1996	19.7	130.5	150.2
1978	17.5	55.8	73.3	1997	11.4	290.0	301.4
1979	36.1	79.5	115.6	1998	5.2	97.7	102.9
1980	56.8	107.0	163.8				
Average 88-97	23.6	161.1	184.7				

[a]Catches (1970-1998) were updated using historical electronic fish ticket databases. Personal use or other subsistence fish not included.

[b]Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to be the last day of stream entry.

Table 41. Chum salmon catch, escapement, and run numbers (in thousands of fish) in the Western District, 1962-1998.

Year	Catch[a]	Escapement[b]	Run	Year	Catch	Escapement	Run
1962	134.4	83.1	217.5	1981	221.6	70.3	291.9
1963	44.7	10.0	54.7	1982	253.3	35.4	288.7
1964	21.2	37.0	58.2	1983	102.0	20.1	122.1
1965	36.4	25.0	61.4	1984	25.4	73.8	99.2
1966	73.8	12.0	85.8	1985	10.7	34.6	45.3
1967	33.6	24.0	57.6	1986	74.1	5.3	79.4
1968	90.1	9.6	99.7	1987	86.9	19.7	106.6
1969	36.8	27.6	64.4	1988	102.7	27.4	130.1
1970	139.6	49.7	189.3	1989	0.0	7.4	7.4
1971	177.5	184.1	361.6	1990	91.6	28.8	120.4
1972	18.5	59.0	77.5	1991	98.6	38.1	136.7
1973	0.0	35.6	35.6	1992	65.5	53.3	118.8
1974	3.2	39.4	42.6	1993	25.0	14.0	39.0
1975	0.8	43.4	44.2	1994	94.1	23.0	117.1
1976	33.1	55.0	88.1	1995	158.3	45.7	204.0
1977	88.0	70.4	158.4	1996	36.3	44.5	80.8
1978	46.0	27.3	73.3	1997	17.1	60.5	77.6
1979	82.3	42.5	124.8	1998	41.4	30.6	72.0
1980	91.9	56.5	148.4				
Average 88-97	68.9	34.3	103.2				

[a]Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to be the last day of stream entry.

[b]Catches (1970-1998) were updated using historical electronic fish ticket databases. Personal use or other subsistence fish not included.

Table 42. Chum salmon catch, escapement, and run numbers (in thousands of fish) in the Perryville District, 1962-1998.

Year	Catch[a]	Escapement[b]	Run	Year	Catch	Escapement	Run
1962	17.9	10.5	28.4	1981	51.3	19.3	70.6
1963	19.1	7.0	26.1	1982	22.6	23.6	46.2
1964	10.6	26.0	36.6	1983	22.6	8.2	30.8
1965	12.8	7.0	19.8	1984	0.5	46.0	46.5
1966	7.9	20.4	28.3	1985	1.1	12.9	14.0
1967	1.7	5.7	7.4	1986	37.0	7.7	44.7
1968	14.0	1.8	15.8	1987	16.9	9.8	26.7
1969	21.1	1.0	22.1	1988	41.2	41.4	82.6
1970	26.3	13.0	39.3	1989	0.0	15.9	15.9
1971	40.9	30.0	70.9	1990	25.7	55.8	81.5
1972	12.3	11.5	23.8	1991	88.6	343.2	431.8
1973	0.0	9.3	9.3	1992	37.2	40.3	77.5
1974	0.0	12.5	12.5	1993	24.7	66.8	91.5
1975	0.0	20.5	20.5	1994	34.0	126.0	160.0
1976	15.7	8.9	24.6	1995	93.0	134.6	227.6
1977	3.4	15.4	18.8	1996	17.0	132.0	149.0
1978	32.1	5.3	37.4	1997	3.0	152.8	155.8
1979	26.9	12.8	39.7	1998	31.8	214.5	246.3
1980	45.0	29.1	74.1				
Average 88-97	36.4	110.9	147.3				

[a]Catches (1970-1998) were updated using historical electronic fish ticket databases. Personal use or other subsistence fish not included.

[b]Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to be the last day of stream entry.

Table 43. Total chum salmon catch, escapement, and run numbers (in thousands of fish) in the Chignik Management Area, 1962-1998.

Year	Catch[a]	Escapement[b]	Run	Year	Catch	Escapement	Run
1962	364.2	220.3	584.5	1981	580.4	242.2	822.6
1963	112.7	107.0	219.7	1982	390.1	255.2	645.3
1964	333.3	255.1	588.4	1983	159.4	95.6	255.0
1965	120.6	112.2	232.8	1984	63.4	370.2	433.6
1966	239.3	104.9	344.2	1985	22.8	62.0	84.8
1967	75.5	140.7	216.2	1986	176.7	52.5	229.2
1968	223.8	89.9	313.7	1987	127.3	85.4	212.7
1969	67.7	103.1	170.8	1988	267.7	361.8	629.5
1970	437.3	233.1	670.4	1989	1.6	136.5	138.1
1971	353.8	469.5	823.3	1990	270.0	253.8	523.8
1972	78.3	195.4	273.7	1991	261.0	469.7	730.7
1973	8.7	116.9	125.6	1992	222.1	573.7	795.8
1974	34.3	148.4	182.7	1993	122.4	255.7	378.1
1975	25.2	126.1	151.3	1994	227.3	382.4	609.7
1976	81.4	206.4	287.8	1995	380.9	347.8	728.7
1977	110.4	151.6	262.0	1996	99.8	368.5	468.3
1978	120.9	104.3	225.2	1997	155.9	587.4	743.3
1979	188.9	181.2	370.1	1998	128.8	379.2	508.0
1980	252.5	227.1	479.6				
Average 88-97	200.9	373.7	574.6				

[a]Catches (1970-1998) were updated using historical electronic fish ticket databases. Personal use or other subsistence fish not included.

[b]Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to be the last day of stream entry.

Table 44. Pink salmon return per spawner in the Central and Eastern Districts, 1962-1998.

Even Year Cycle[a,b,c]				Odd Year Cycle[a,b,c]			
Brood Year	Pink Escapement	Return 2-yrs Later	Return/ Spawner	Brood Year	Pink Escapement	Return 2-yrs Later	Return/ Spawner
1962	485,600	2,060,200	4.2	1963	218,800	225,800	1.0
1964	736,800	768,400	1.0	1965	130,600	123,200	0.9
1966	364,800	1,025,200	2.8	1967	74,600	118,700	1.6
1968	456,400	559,800	1.2	1969	115,600	147,300	1.3
1970	262,400	32,700	0.1	1971	97,800	65,800	0.7
1972	19,000	108,700	5.7	1973	63,000	81,200	1.3
1974	86,000	340,200	4.0	1975	49,900	396,100	7.9
1976	294,800	558,500	1.9	1977	275,900	1,068,100	3.8
1978	410,500	1,106,100	2.7	1979	491,300	614,500	1.3
1980	524,900	497,300	0.9	1981	231,200	73,000	0.3
1982	327,600	685,500	2.1	1983	57,300	242,200	4.2
1984	580,500	796,300	1.4	1985	219,500	291,200	1.3
1986	702,600	2,546,600	3.6	1987	281,300	1,096,000	3.9
1988	1,221,800	1,217,600	1.0	1989	1,096,000	528,100	0.5
1990	943,300	1,930,700	2.0	1991	326,100	943,400	2.9
1992	1,541,900	1,153,400	0.8	1993	685,600	2,593,100	3.8
1994	1,042,200	1,319,700	1.3	1995	2,114,800	2,554,700	1.2
1996	1,296,700	1,784,500	1.4	1997	1,882,400		
1998	1,484,100						

Table 45. Pink salmon return per spawner in the Western and Perryville Districts, 1962-1998.

Even Year Cycle[a,b,c]				Odd Year Cycle[a,b,c]			
Brood Year	Pink Escapement	Return 2-yrs Later	Return/ Spawner	Brood Year	Pink Escapement	Return 2-yrs Later	Return/ Spawner
1962	397,500	472,500	1.2	1963	467,000	1,225,400	2.6
1964	237,000	530,700	2.2	1965	234,600	292,000	1.2
1966	269,300	771,700	2.9	1967	259,700	2,387,800	9.2
1968	280,000	1,088,700	3.9	1969	640,600	811,300	1.3
1970	274,600	43,300	0.2	1971	313,800	93,900	0.3
1972	16,400	151,000	9.2	1973	93,900	194,400	2.1
1974	137,600	444,500	3.2	1975	187,000	894,500	4.8
1976	203,500	1,191,000	5.9	1977	470,900	1,382,300	2.9
1978	490,900	545,400	1.1	1979	366,300	1,023,200	2.8
1980	214,300	680,000	3.2	1981	365,300	378,700	1.0
1982	59,300	472,400	8.0	1983	100,500	425,800	4.2
1984	297,800	586,400	2.0	1985	302,700	327,000	1.1
1986	224,300	1,966,300	8.8	1987	104,000	325,300	3.1
1988	413,700	313,900	0.8	1989	325,300	1,331,500	4.1
1990	132,700	1,216,300	9.2	1991	440,300	1,828,800	4.2
1992	229,200	524,900	2.3	1993	494,200	2,609,500	5.3
1994	265,500	775,800	2.9	1995	1,136,700	660,400	0.6
1996	616,500	318,289	0.5	1997	527,800		
1998	373,300						

[a] Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to be last day for stream entry.

[b] Catches (1970-1998) were updated using historical electronic fish ticket databases.

[c] Personal use or other subsistence fish are not included.

Table 46. Chum salmon return per spawner in the Central and Eastern Districts, 1962-1998.

Brood[a,b,c] Year	Chum Escapement	Return 4-yrs Later	turn/ wner	Brood[a,b,c] Year	Chum Escapement	Return 4-yrs Later	Return/ Spawner
1962	120,000	219,000	1.8	1981	152,100	20,600	0.1
1963	89,200	141,300	1.6	1982	194,800	86,900	0.4
1964	189,600	191,800	1.0	1983	67,200	74,100	1.1
1965	77,200	79,900	1.0	1984	250,100	194,500	0.8
1966	68,000	149,400	2.2	1985	14,500	109,000	7.5
1967	107,000	364,400	3.4	1986	39,500	308,900	7.8
1968	77,500	150,900	2.0	1987	55,800	144,700	2.6
1969	73,000	72,700	1.0	1988	277,700	586,700	2.1
1970	149,400	108,700	0.7	1989	109,000	239,000	2.2
1971	248,300	63,300	0.3	1990	167,700	305,700	1.8
1972	121,600	153,500	1.3	1991	88,400	272,400	3.1
1973	71,300	74,200	1.0	1992	480,000	202,300	0.4
1974	94,400	97,400	1.0	1993	174,600	470,400	2.7
1975	60,100	171,800	2.9	1994	231,800		
1976	140,100	236,900	1.7	1995	157,200		
1977	63,800	421,500	6.6	1996	175,400		
1978	69,600	293,000	4.2	1997	355,600		
1979	124,300	85,300	0.7	1998			
1980	141200	279400	2.0				

Table 47. Chum salmon return per spawner in the Western and Perryville Districts, 1962-1998.

Brood[a,b,c] Year	Chum Escapement	Return 4-yrs Later	turn/ wner	Brood[a,b,c] Year	Chum Escapement	Return 4-yrs Later	Return/ Spawner
1962	93,600	114,100	1.2	1981	89,600	59,300	0.7
1963	17,000	65,000	3.8	1982	59,000	124,100	2.1
1964	63,000	115,500	1.8	1983	28,300	133,300	4.7
1965	32,000	86,500	2.7	1984	119,800	212,700	1.8
1966	32,400	228,600	7.1	1985	47,500	23,300	0.5
1967	29,700	432,500	14.6	1986	13,000	201,900	15.5
1968	11,400	101,300	8.9	1987	29,500	568,500	19.3
1969	28,600	44,900	1.6	1988	68,800	196,300	2.9
1970	62,700	55,100	0.9	1989	23,300	130,600	5.6
1971	214,100	64,700	0.3	1990	84,600	277,100	3.3
1972	70,500	112,700	1.6	1991	381,300	431,500	1.1
1973	44,900	177,200	3.9	1992	93,600	229,800	2.5
1974	51,900	110,700	2.1	1993	80,800	223,500	2.8
1975	63,900	164,500	2.6	1994	149,000		
1976	63,900	222,500	3.5	1995	180,300		
1977	85,800	362,500	4.2	1996	176,500		
1978	32,600	334,900	10.3	1997	213,300		
1979	55,300	152,900	2.8	1998			
1980	85,600	145,700	1.7				

[a] Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett, 1988). September 15 was assumed to be last day for stream entry.

[b] Catches (1970-1998) were updated using historical electronic fish ticket databases.

[c] Personal use or other subsistence fish are not included.

Table 48. Salmon escapement survey counts in the Chignik Management Area, 1998.

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
Boulevard Creek, 271-083								
07/25/1998	Stream	G	0	80,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	G	0	100,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Black Lake, 271-084								
07/25/1998	Stream	G	0	60,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Alec River, 271-085								
07/25/1998	Stream	P	0	50,000	0	0	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
08/03/1998	Stream	P	0	35,000	0	0	0	EXTREMELY TURBID.
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
Spring Creek, 271-086								
07/25/1998	Stream	G	0	15,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	G	0	18,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Broad Creek, 271-087								
07/25/1998	Stream	G	0	25,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	P	0	62,000	0	0	0	EXTREMELY TURBID.
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
Conglomerate Creek, 271-088								
07/25/1998	Stream	G	0	3,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	G	0	9,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Cathedral Creek, 271-089								
07/25/1998	Stream	G	0	500	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	

-Continued-

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/03/1998	Stream	G	0	2,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Milk Creek, 271-090								
07/25/1998	Stream	G	0	12,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	G	0	14,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Fan Creek, 271-091								
07/25/1998	Stream	G	0	90,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	F	0	90,000	0	0	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
Chiaktuak Creek, 271-092								
07/25/1998	Stream	G	0	25,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	F	0	20,000	0	0	0	PAST PRIME SPAWNING TIME.
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/24/1998	Stream	G	0	27,500	0	0	0	NEW FISH ENTERING THE
David Owen	Mouth	G	0	2,000	0	0	0	SYSTEM
	Bay	G	0	0	0	0	0	
Cucumber Creek, 271-093								
08/11/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	200	0	0	0	
	Bay	G	0	0	0	0	0	
08/16/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	1,000	0	0	0	
	Bay	G	0	4,000	0	0	0	
08/24/1998	Stream	G	0	200	0	0	0	
David Owen	Mouth	G	0	5,000	0	0	0	
	Bay	G	0	0	0	0	0	
09/03/1998	Stream	P	0	1,000	0	0	0	
David Owen	Mouth	P	0	1,000	0	0	0	
	Bay	P	0	5,000	0	0	0	
West Fork River, 271-094								
07/25/1998	Stream	G	0	55,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 3 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/03/1998	Stream	F	0	71,000	0	0	0	ALL CLEAR SIDE CHANNELS
David Owen	Mouth	F	0	0	0	0	0	PLUGGED. SOME FISH ON
	Bay	F	0	0	0	0	0	BOTTOM OF RIVER.
08/24/1998	Stream	G	0	11,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Bearskin Creek, 271-095								
07/25/1998	Stream	G	0	3,600	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	F	0	4,700	0	0	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/24/1998	Stream	G	0	600	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Hatchery Beach, 271-096								
08/03/1998	Stream	P	0	0	0	0	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
08/16/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/03/1998	Stream	P	0	60,000	0	0	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
Clark River, 271-097								
08/03/1998	Stream	F	0	50	0	0	0	
David Owen	Mouth	F	0	10,000	0	0	0	
	Bay	F	0	0	0	0	0	
08/16/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	50,000	0	0	0	
	Bay	G	0	0	0	0	0	
08/20/1998	Stream	P	0	1,500	0	0	0	
David Owen	Mouth	P	0	100,000	0	0	0	
	Bay	P	0	0	0	0	0	
08/24/1998	Stream	G	0	12,000	0	0	0	
David Owen	Mouth	G	0	50,000	0	0	0	
	Bay	G	0	0	0	0	0	
09/03/1998	Stream	P	0	21,000	0	0	0	
David Owen	Mouth	P	0	15,000	0	0	0	
	Bay	P	0	10,000	0	0	0	
Home Creek, 271-099								
08/16/1998	Stream	G	0	2,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 4 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/20/1998	Stream	P	0	3,000	0	0	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
08/24/1998	Stream	G	0	6,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/03/1998	Stream	P	0	4,300	0	0	0	
David Owen	Mouth	P	0	300	0	0	0	
	Bay	P	0	0	0	0	0	
Lake Bay Creek, 271-101B								
07/17/1998	Stream	F	0	0	0	0	0	SEVERAL BALLS OF SMALL
Dave Sarafin	Mouth	P	0	0	0	0	200	FISH IN BAY, POSSIBILY
	Bay	P	0	0	0	0	0	PINKS.
07/27/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	200	0	
	Bay	G	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	0	0	
David Owen	Mouth	E	0	0	0	500	750	
	Bay	E	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	4,000	1,000	
	Bay	G	0	0	0	0	0	
08/20/1998	Stream	P	0	0	0	4,000	0	
David Owen	Mouth	P	0	0	0	2,000	0	
	Bay	P	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	1,000	0	COHO SURVEY
David Owen	Mouth	G	0	0	0	1,000	500	
	Bay	G	0	0	0	0	0	
Mallard Duck Creek, 271-102								
07/26/1998	Stream	G	0	0	0	0	200	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	0	25	
David Owen	Mouth	E	0	0	0	0	1,000	
	Bay	E	0	0	0	0	0	
08/11/1998	Stream	E	0	0	0	0	0	
David Owen	Mouth	E	0	0	0	0	5,000	
	Bay	E	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	500	3,000	COHO SURVEY
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Marshiniak Creek, 271-102A								
07/26/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	50	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 5 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
07/31/1998	Stream	E	0	0	0	0	0	
David Owen	Mouth	E	0	0	0	0	0	
	Bay	E	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	50	0	
	Bay	G	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	0	0	COHO SURVEY
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Mud Bay, 271-102C								
07/27/1998	Stream	G	0	1,000	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/31/1998	Stream	E	0	1,500	0	0	0	
David Owen	Mouth	E	0	0	0	0	0	
	Bay	E	0	0	0	0	0	
08/11/1998	Stream	E	0	1,500	0	0	0	500 SPAWNING IN THE CREEK
David Owen	Mouth	E	0	0	0	0	0	1,000 ON THE OUTLET LEDGE
	Bay	E	0	0	0	0	0	
08/20/1998	Stream	P	0	500	0	0	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
09/04/1998	Stream	G	0	50	0	0	0	COHO SURVEY. OLD
David Owen	Mouth	G	0	0	10	0	0	SPAWNED REDS
	Bay	G	0	0	0	0	0	
Metrofania Creek, 271-103								
08/11/1998	Stream	G	0	0	0	2,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	0	50	COHO SURVEY
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Alfred Creek, 271-104								
07/26/1998	Stream	G	0	0	0	200	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	600	0	
David Owen	Mouth	E	0	0	0	0	0	
	Bay	E	0	0	0	0	0	
08/03/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	600	0	
	Bay	F	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	700	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 6 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/27/1998	Stream	F	0	0	0	2,000	0	
David Owen	Mouth	F	0	0	0	50	0	
	Bay	F	0	0	0	0	0	
Frank Creek, 271-105								
07/26/1998	Stream	G	0	0	0	0	2	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	0	0	
David Owen	Mouth	E	0	0	0	100	0	
	Bay	E	0	0	0	0	0	
08/03/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	1,500	0	
	Bay	F	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	500	0	
	Bay	G	0	0	0	0	0	
08/27/1998	Stream	F	0	0	0	25	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
Through Creek, 271-106								
07/26/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	F	0	0	0	50	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	1,000	0	
David Owen	Mouth	G	0	0	0	1,500	0	
	Bay	G	0	0	0	0	0	
08/27/1998	Stream	F	0	0	0	400	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
272-100								
07/17/1998	Stream	F	0	0	0	0	0	
Dave Sarafin	Mouth	F	0	0	0	0	25	
	Bay	P	0	0	0	0	0	
07/27/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	0	0	
David Owen	Mouth	E	0	0	0	0	0	
	Bay	E	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	500	50	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 7 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/20/1998	Stream	P	0	0	0	0	200	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	0	100	COHO SURVEY
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Chignik Bay, 272-201								
07/26/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	F	0	0	0	30	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/27/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
Chignik Bay, 272-202A								
07/26/1998	Stream	G	0	0	0	100	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	F	0	0	0	1,000	0	
David Owen	Mouth	F	0	0	0	400	0	
	Bay	F	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	1,500	0	
David Owen	Mouth	G	0	0	0	1,000	0	
	Bay	G	0	0	0	0	0	
08/27/1998	Stream	F	0	0	0	200	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
Neketa Creek, 272-202B								
07/26/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	200	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/27/1998	Stream	F	0	0	0	20	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	

-Continued-

Table 48. (page 8 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
Thompson Creek, 272-204								
07/26/1998	Stream	G	0	0	0	1,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	F	0	0	0	3,000	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	13,000	0	
David Owen	Mouth	G	0	0	0	1,000	0	
	Bay	G	0	0	0	0	0	
08/27/1998	Stream	G	0	0	0	20,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Mckinsey Creek, 272-205								
07/26/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Dry Creek, 272-206								
07/26/1998	Stream	G	0	0	0	400	300	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/03/1998	Stream	F	0	0	0	200	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	2,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/27/1998	Stream	G	0	0	0	600	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
272-301								
08/11/1998	Stream	G	0	0	0	7,000	0	
David Owen	Mouth	G	0	0	0	10,000	0	
	Bay	G	0	0	0	0	0	
08/24/1998	Stream	P	0	0	0	13,000	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
Hook Creek, 272-302								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 9 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
07/26/1998	Stream	G	0	0	0	0	500	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	13,000	0	
David Owen	Mouth	G	0	0	0	200	0	
	Bay	G	0	0	0	0	0	
08/24/1998	Stream	F	0	0	0	19,000	0	
David Owen	Mouth	F	0	0	0	1,000	0	
	Bay	F	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY, LOTS OF
David Owen	Mouth	F	0	0	0	0	0	PINKS SPAWNING, NO FRESH
	Bay	F	0	0	0	0	0	PINKS IN MOUTH
Kumlium Creek, 272-501								
07/26/1998	Stream	G	0	0	0	2,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
, 272-502								
07/26/1998	Stream	G	0	0	0	50	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/24/1998	Stream	P	0	0	0	200	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
, 272-502A								
07/26/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	200	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Kujulik Bay, 272-504								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/26/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/24/1998	Stream	P	0	0	0	0	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
Bear Creek, 272-505								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	E	0	0	0	0	25	
	Bay	G	0	0	0	0	200	

-Continued-

Table 48. (page 10 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
07/26/1998	Stream	G	0	0	0	0	5,000	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	0	1,000	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/24/1998	Stream	G	0	0	0	6,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Packer's Creek, 272-506								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	E	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/26/1998	Stream	G	0	0	0	0	500	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	10	200	
David Owen	Mouth	G	0	0	0	200	0	
	Bay	G	0	0	0	0	0	
Kujulik Bay, 272-507								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	E	0	0	0	0	50	
	Bay	G	0	0	0	0	100	
07/26/1998	Stream	G	0	0	0	0	1,000	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	0	400	
David Owen	Mouth	G	0	0	0	0	3	
	Bay	G	0	0	0	0	0	
Kujulik Bay, 272-508								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	E	0	0	0	0	25	
	Bay	G	0	0	0	0	300	
07/26/1998	Stream	G	0	0	0	0	200	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	0	1,100	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Rudy's Creek, 272-509								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	E	0	0	0	0	50	
	Bay	G	0	0	0	0	400	
07/26/1998	Stream	G	0	0	0	0	2,400	
David Owen	Mouth	G	0	0	0	0	500	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 11 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/11/1998	Stream	G	0	0	0	17,000	7,000	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	150	0	
Kujulik Bay, 272-510								
07/14/1998	Stream	E	0	0	0	0	10	
Dave Sarafin	Mouth	E	0	0	0	0	100	
	Bay	G	0	0	0	0	0	
07/26/1998	Stream	G	0	0	0	0	300	
David Owen	Mouth	G	0	0	0	0	100	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	1,000	10	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Kujulik Bay, 272-511A								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	E	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/26/1998	Stream	G	0	0	0	0	400	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	5,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Kujulik Bay, 272-511B								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	E	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/26/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	50	0	
David Owen	Mouth	G	0	0	0	100	0	
	Bay	G	0	0	0	0	0	
Kujulik Bay, 272-512								
07/26/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
North Fork River, 272-514								
07/14/1998	Stream	E	0	0	0	0	50	
Dave Sarafin	Mouth	E	0	0	0	0	50	
	Bay	G	0	0	0	0	2,500	
07/26/1998	Stream	G	0	0	0	4,000	4,000	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 12 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/11/1998	Stream	P	0	0	0	32,000	2,000	
David Owen	Mouth	P	0	0	0	1,000	0	
	Bay	P	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	30,000	1,000	
David Owen	Mouth	G	0	0	0	3,000	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			2,000	500		COHO SURVEY, OLD
David Owen	Mouth	F	0	0	0	0	0	SPAWNED PINK SALMON,
	Bay	F	0	0	0	0	0	SOME NEW MOUTH
New Creek, 272-516								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	E	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/26/1998	Stream	G	0	0	0	1,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	15,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	8,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0	500		COHO SURVEY, OLD
David Owen	Mouth	F	0	0	0	0	0	SPAWNED PINK SALMON,
	Bay	F	0	0	0	0	0	SOME NEW MOUTH
Wolverine Creek, 272-602								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	14,000	0	
David Owen	Mouth	G	0	0	0	3,000	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY, OLD
David Owen	Mouth	F	0	0	0	0	0	SPAWNED PINK SALMON
	Bay	F	0	0	0	0	0	
Village Creek, 272-603								
08/11/1998	Stream	G	0	0	0	3,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	8,000	0	
David Owen	Mouth	G	0	0	0	3,000	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY, PINKS
David Owen	Mouth	F	0	0	0	0	0	ALMOST ALL SPAWNED,
	Bay	F	0	0	0	0	0	NO NEW PINKS

-Continued-

Table 48. (page 13 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
Black Creek, 272-604								
07/14/1998	Stream		0	0	0	0	0	SURVEYED BAY AND
Dave Sarafin	Mouth		0	0	0	0	0	LAGOON MOUTH, BUT NOT
	Bay	F	0	0	0	0	2,000	STREAM.
09/05/1998	Stream	F			0			COHO SURVEY, NOTHING IN
David Owen	Mouth	F	0	0	0	0	0	LOWER REACHES
	Bay	F	0	0	0	0	0	
Aniakchak River, 272-605								
07/14/1998	Stream	E	0	0	0	0	13,000	SEALS INSIDE MOUTH AREA.
Dave Sarafin	Mouth	F	0	0	0	0	500	NORTH FORK-MOUTH 50 CHUM,
	Bay	F	0	0	0	0	8,000	STREAM 400 CHUM..
07/23/1998	Stream	F	0	500	0	0	50,000	MAIN STREAM NOT
David Owen	Mouth	F	0	0	0	0	0	SURVEYED. NORTH FORK-
	Bay	F	0	0	0	0	0	STREAM.CHUMS. ALBERT JOHNSON- REDS.
08/09/1998	Stream	F	0	0	0	115,000	2,000	TURBIBITY, HIGH.
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/11/1998	Stream	G	0	50	0	150,000	25,000	NORTHFORK CHUMS + PINKS
David Owen	Mouth	G	0	0	0	0	0	ALBERT JOHNSON = 23000 PINKS
	Bay	G	0	0	0	0	0	MYSTERY CREEK = 25000 PINKS
09/05/1998	Stream	F			700			COHO SURVEY, PINKS ALMOST
David Owen	Mouth	F	0	0	0	0	0	ALL SPAWNED, NO NEW
	Bay	F	0	0	0	0	0	PINKS
Fred Gungus, 272-606								
07/23/1998	Stream	F	0	0	0	9,000	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/18/1998	Stream	F	0	0	0	39,000	0	
David Owen	Mouth	F	0	0	0	1,000	0	
	Bay	F	0	0	0	0	0	
08/28/1998	Stream	G	0	0	1,500	12,000	0	LOTS OF CARCASSES
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			300			COHO SURVEY, PINKS ALMOST
David Owen	Mouth	F	0	0	0	0	0	ALL SPAWNED, NO NEW PINKS
	Bay	F	0	0	0	0	0	
West Creek, 272-701								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	G	0	0	0	0	100	
	Bay	F	0	0	0	0	0	
07/23/1998	Stream	F	0	0	0	5,000	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	17,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 14 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
Main Creek, 272-702								
07/14/1998	Stream	E	0	0	0	0	0	
Dave Sarafin	Mouth	G	0	0	0	0	100	
	Bay	F	0	0	0	0	0	
07/23/1998	Stream	F	0	0	0	75,000	500	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/09/1998	Stream	F	0	0	0	90,000	0	TURBIDITY, HIGH.
David Owen	Mouth	F	0	0	0	2,000	0	
	Bay	F	0	0	0	0	0	
08/28/1998	Stream	G	0	0	5,000	52,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			10,000			COHO SURVEY, LOTS OF PINKS
David Owen	Mouth	F	0	0	0	0	0	SPAWNING AND CARCUSSES,
	Bay	F	0	0	0	0	0	NO FRESH PINKS IN MOUTH
Northeast Creek, 272-703								
07/14/1998	Stream	G	0	0	0	0	0	
Dave Sarafin	Mouth	G	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
07/23/1998	Stream	F	0	0	0	16,000	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	32,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			300			COHO SURVEY, LOTS OF
David Owen	Mouth	F	0	0	0	0	0	PINKS SPAWNING
	Bay	F	0	0	0	0	0	
Cape Kunmik, 272-704								
08/18/1998	Stream	P	0	0	0	1,000	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	100	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Yantarni Bay, 272-720								
07/14/1998	Stream	G	0	0	0	0	0	
Dave Sarafin	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/23/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	0	0	DRIED AND DIMINISHED
David Owen	Mouth	G	0	0	0	0	0	STREAM
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 15 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/28/1998	Stream	G	0	0	0	1,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Yantarni Creek, 272-721								
07/14/1998	Stream	G	0	0	0	0	0	
Dave Sarafin	Mouth	G	0	0	0	0	100	
	Bay	G	0	0	0	0	2,000	
07/23/1998	Stream	F	0	0	0	0	1,400	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/09/1998	Stream	F	0	0	0	46,000	3,000	ESCAPED.
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	37,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	32,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY, LOTS OF PINKS
David Owen	Mouth	F	0	0	0	0	0	SPAWNING, NOT MANY
	Bay	F	0	0	0	0	0	CARCUSSES
Ocean Beach, 272-801								
07/23/1998	Stream	F	0	0	0	0	1,100	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	36,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	45,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			4,000			COHO SURVEY, LOTS OF PINKS
David Owen	Mouth	F	0	0	0	0	0	SPAWNING, NOT MANY
	Bay	F	0	0	0	0	0	CARCUSSES
Ocean Beach (north), 272-802								
07/14/1998	Stream	G	0	0	0	0	0	
Dave Sarafin	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
07/23/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/09/1998	Stream	F	0	0	0	8,000	1,000	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	20,000	0	

-Continued-

Table 48. (page 16 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/18/1998	Stream	G	0	0	0	17,000	1,000	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/28/1998	Stream	G	0	0	500	22,000	500	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			2,500			COHO SURVEY, LOTS OF PINKS
David Owen	Mouth	F	0	0	0	0	0	SPAWNING, NO FRESH
	Bay	F	0	0	0	0	0	PINKS IN MOUTH
Nakalilok Bay, 272-803								
07/14/1998	Stream	G	0	0	0	0	0	
Dave Sarafin	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
07/23/1998	Stream	F	0	0	0	1,000	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/09/1998	Stream	F	0	0	0	500	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/18/1998	Stream	F	0	0	0	500	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	3,000	100	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Nakalilok River, 272-804								
07/14/1998	Stream	G	0	0	0	0	0	
Dave Sarafin	Mouth	G	0	0	0	0	100	
	Bay	F	0	0	0	0	0	
07/23/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	0	2,000	
	Bay	F	0	0	0	0	0	
08/09/1998	Stream	F	0	0	0	50,000	0	OVER ESCAPED.
David Owen	Mouth	F	0	0	0	80,000	0	
	Bay	F	0	0	0	10,000	0	
08/18/1998	Stream	F	0	0	0	68,000	7,000	OVERESCAPED
David Owen	Mouth	F	0	0	0	50,000	0	
	Bay	F	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	65,000	7,500	OVERESCAPED
David Owen	Mouth	G	0	0	0	21,000	0	
	Bay	G	0	0	500	0	0	
09/05/1998	Stream	F			10,000			COHO SURVEY, LOTS OF PINKS
David Owen	Mouth	F	0	0	0	0	0	SPAWNING, NO FRESH
	Bay	F	0	0	0	0	0	PINKS IN MOUTH
Nakalilok Bay(north), 272-805								
07/14/1998	Stream	G	0	0	0	0	0	
Dave Sarafin	Mouth	G	0	0	0	0	200	
	Bay	F	0	0	0	0	0	

-Continued-

Table 48. (page 17 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
07/23/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/09/1998	Stream	G	0	0	0	3,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/18/1998	Stream	F	0	0	0	10,000	1,000	
David Owen	Mouth	F	0	0	0	20,000	0	
	Bay	F	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	12,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY, LOTS OF PINKS
David Owen	Mouth	F	0	0	0	0	0	SPAWNING. NO FRESH
	Bay	F	0	0	0	0	0	PINKS IN MOUTH
, 272-900								
07/23/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	3,000	0	
	Bay	G	0	0	0	0	0	
08/09/1998	Stream	G	0	0	0	500	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/18/1998	Stream	F	0	0	0	1,000	0	
David Owen	Mouth	F	0	0	0	3,000	0	
	Bay	F	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	500	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY, NO PINK AND
David Owen	Mouth	F	0	0	0	0		CHUM SALMON LEFT
	Bay	F	0	0	0	0	0	
Cape Kuyuyukak, 272-901								
07/23/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	200	
	Bay	G	0	0	0	0	0	
08/09/1998	Stream	G	0	0	0	1,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/18/1998	Stream	F	0	0	0	4,000	0	DRIED UP
David Owen	Mouth	F	0	0	0	500	0	
	Bay	F	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	2,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
272-902								
07/14/1998	Stream	G	0	0	0	0	0	
Dave Sarafin	Mouth	G	0	0	0	0	0	
	Bay	F	0	0	0	0	400	

-Continued-

Table 48. (page 18 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
07/23/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/09/1998	Stream	G	0	0	0	4,000	0	
David Owen	Mouth	G	0	0	0	20,000	0	
	Bay	G	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	12,000	0	DRIED UP
David Owen	Mouth	G	0	0	0	10,000	0	
	Bay	G	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	14,000	100	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			25			COHO SURVEY, LOT OF PINK
David Owen	Mouth	F	0	0	0	0		AND CHUM SPAWNING, AND
	Bay	F	0	0	0	0	0	CARCUSSES.
Chiginagak River, 272-903								
07/14/1998	Stream	G	0	0	0	0	0	
Dave Sarafin	Mouth	G	0	0	0	0	0	
	Bay	F	0	0	0	0	1,000	
07/23/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	4,000	
	Bay	G	0	0	0	0	3,000	
08/09/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
Chiginagak River, 272-903A								
07/23/1998	Stream	P	0	0	0	0	1,000	EXTREMELY TURBID.
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
08/09/1998	Stream	F	0	0	0	40,000	3,000	
David Owen	Mouth	F	0	0	0	70,000	0	
	Bay	F	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	32,000	5,000	
David Owen	Mouth	G	0	0	0	3,000	4,000	
	Bay	G	0	0	0	20,000	0	
08/28/1998	Stream	G	0	0	0	55,000	1,000	
David Owen	Mouth	G	0	0	0	22,000	1,000	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0	30,000		COHO SURVEY, LOTS OF FISH
David Owen	Mouth	F	0	0	0	0	0	SPAWNING, NEW PINK
	Bay	F	0	0	0	0	0	SALMON ON LOWER REACHES
Chiginagak Bay, 272-903B								
07/14/1998	Stream	F	0	0	0	0	0	2000 FISH IN STREAM, SPECIES
Dave Sarafin	Mouth	F	0	0	0	0	0	UNKNOWN, POSSIBLY
	Bay	F	0	0	0	0	0	PINKS.

-Continued-

Table 48. (page 19 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
07/23/1998	Stream	G	0	0	0	25	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/09/1998	Stream	F	0	0	0	1,000	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	0	0	DRIED UP
David Owen	Mouth	G	0	0	0	0	1,000	
	Bay	G	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	14,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	2,000	0	
09/05/1998	Stream	F			0			COHO SURVEY
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
Chiginagak Bay, 272-904								
07/14/1998	Stream	F	0	0	0	0	0	3000 FISH AT MOUTH,
Dave Sarafin	Mouth	F	0	0	0			POSSIBLY PINKS.
	Bay	F	0	0	0	0	0	
07/23/1998	Stream	G	0	0	0	0	500	
David Owen	Mouth	G	0	0	0	0	2,000	
	Bay	G	0	0	0	0	0	
08/09/1998	Stream	G	0	0	0	10,000	0	
David Owen	Mouth	G	0	0	0	15,000	0	
	Bay	G	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	20,000	1,000	
David Owen	Mouth	G	0	0	0	20,000	0	
	Bay	G	0	0	0	20,000	0	
08/28/1998	Stream	G	0	0	0	35,000	1,000	OVERESCAPED
David Owen	Mouth	G	0	0	0	10,000	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			1,000	15,000		COHO SURVEY, FRESH PINKS
David Owen	Mouth	F	0	0	0	0	0	ON BOTTOM REACHES
	Bay	F	0	0	0	0	0	
Chiginagak Bay, 272-905								
07/14/1998	Stream	F	0	0	0	0	0	1000 FISH AT MOUTH ,
Dave Sarafin	Mouth	F	0	0	0			POSSIBLY PINKS.
	Bay	F	0	0	0	0	0	
07/23/1998	Stream	G	0	0	0	500	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/09/1998	Stream	G	0	0	0	5,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	6,000	1,000	
David Owen	Mouth	G	0	0	0	10,000	0	
	Bay	G	0	0	0	30,000	0	

-Continued-

Table 48. (page 20 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/28/1998	Stream	G	0	0	0	4,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Chiginagak Bay, 272-906								
07/23/1998	Stream	G	0	0	0	1,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/09/1998	Stream	G	0	0	0	2,000	0	
David Owen	Mouth	G	0	0	0	50,000	0	
	Bay	G	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	1,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	20,000	0	LOTS OF CARCASSES
David Owen	Mouth	G	0	0	0	40,000	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0	30,000		COHO SURVEY, NEW PINK
David Owen	Mouth	F	0	0	0	0	0	SALMON, LOTS OF PINK AND
	Bay	F	0	0	0	0	0	CHUM CARCUSSES
Chiginagak Bay, 272-907								
07/14/1998	Stream	F	0	0	0	0	0	THESE FISH WERE SEEN IN
Dave Sarafin	Mouth	F	0	0	0	0	0	THE HOOK BAY AROUND
	Bay	F	0	0	0	0	1,000	THE POINT FROM 907.
07/23/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	1,000	0	
08/09/1998	Stream	G	0	0	0	0	0	FISH LIE IN BETWEEN 272-907
David Owen	Mouth	G	0	0	0	1,000	0	AND 272-906, IN THE
	Bay	G	0	0	0	100,000	0	KELP.
08/18/1998	Stream	E	0	0	0	3,000	0	
David Owen	Mouth	E	0	0	0	1,000	0	
	Bay	E	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	2,000	0	
David Owen	Mouth	G	0	0	0	500	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY, NO NEW FISH,
David Owen	Mouth	F	0	0	0	0	0	LOTS OF PINK AND CHUM
	Bay	F	0	0	0	0	0	CARCUSSES
Port Wrangell Bay, 272-921								
07/23/1998	Stream	P	0	0	0	0	0	EXTREMELY TURBID.
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
08/09/1998	Stream	P	0	500	0	10,000	1,000	EXTREMELY TURBID.
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
08/18/1998	Stream	F	0	200	0	30,000	0	ESCAPED
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	1,000	0	

-Continued-

Table 48. (page 21 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/28/1998	Stream	G	0	0	0	25,000	0	
David Owen	Mouth	G	0	0	500	0	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY, NO NEW FISH,
David Owen	Mouth	F	0	0	0	0	0	LOTS OF PINK AND CHUM
	Bay	F	0	0	0	0	0	CARCUSSES
Port Wrangell Bay, 272-922								
07/23/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/09/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	3,500	
	Bay	G	0	0	0	0	0	
08/18/1998	Stream	G	0	0	0	2,000	0	ESCAPED
David Owen	Mouth	G	0	0	0	5,000	0	
	Bay	G	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	4,000	0	OVERESCAPED
David Owen	Mouth	G	0	0	0	10,000	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY, NO NEW FISH,
David Owen	Mouth	F	0	0	0	0	0	LOTS OF PINK AND CHUM
	Bay	F	0	0	0	0	0	CARCUSSES
Cape Providence, 272-923								
07/23/1998	Stream	E	0	0	0	0	0	
David Owen	Mouth	E	0	0	0	500	0	
	Bay	E	0	0	0	0	0	
08/09/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	20,000	1,000	
	Bay	G	0	0	0	0	0	
08/18/1998	Stream	E	0	0	0	500	0	ESCAPED
David Owen	Mouth	E	0	0	0	4,000	0	
	Bay	E	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	4,000	0	OVERESCAPED
David Owen	Mouth	G	0	0	0	10,000	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY, NO NEW FISH,
David Owen	Mouth	F	0	0	0	0	0	LOTS OF PINK AND CHUM
	Bay	F	0	0	0	0	0	CARCUSSES
Agripina Lake, 272-961A								
07/14/1998	Stream	G	0	0	0	500	0	
Dave Sarafin	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
07/23/1998	Stream	P	0	0	0	0	50	EXTREMELY TURBID.
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	

-Continued-

Table 48. (page 22 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/28/1998	Stream	G	0	0	0	41,500	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY, NO NEW FISH
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
Agripina Slough, 272-961B								
07/23/1998	Stream	G	0	0	0	6,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/18/1998	Stream	E	0	0	0	40,000	0	ESCAPED
David Owen	Mouth	E	0	0	0	2,000	2,000	
	Bay	E	0	0	0	0	0	
08/28/1998	Stream	G	0	200	0	200	0	
David Owen	Mouth	G	0	0	0	2,000	0	
	Bay	G	0	0	0	0	0	
09/05/1998	Stream	F			0			COHO SURVEY, NO NEW FISH,
David Owen	Mouth	F	0	0	0	0	0	LOT OF PINK AND CHUM
	Bay	F	0	0	0	0	0	CARCUSSES
Glacier Creek, 272-962								
07/23/1998	Stream	P	0	0	0	0	200	EXTERMELY TURBID.
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
08/18/1998	Stream	E	0	0	0	6,000	0	
David Owen	Mouth	E	0	0	0	0	0	
	Bay	E	0	0	0	0	0	
08/28/1998	Stream	G	0	0	0	2,000	1,000	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Glacier Creek, 272-962A								
08/18/1998	Stream	E	0	0	0	0	250	
David Owen	Mouth	E	0	0	0	1,000	0	
	Bay	E	0	0	0	1,000	0	
08/28/1998	Stream	G	0	500	0	4,000	4,000	UPPER REACHES DRY
David Owen	Mouth	G	0	0	150	700	0	
	Bay	G	0	0	0	0	0	
Kilokak Creek, 272-963								
08/18/1998	Stream	E	0	0	0	5,000	0	
David Owen	Mouth	E	0	0	0	2,000	0	
	Bay	E	0	0	0	20,000	0	
08/28/1998	Stream	G	0	0	0	6,000	0	UPPER REACHES DRY
David Owen	Mouth	G	0	0	0	25,000	0	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 23 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
Red Bluff Creek, 273-702								
07/11/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
07/17/1998	Stream	P	0	0	0	0	500	
Dave Sarafin	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
07/27/1998	Stream	F	0	0	0	1,000	1,000	
David Owen	Mouth	F	0	0	0	3,000	0	
	Bay	F	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	13,000	500	
David Owen	Mouth	E	0	0	0	7,000	0	
	Bay	E	0	0	0	0	0	
08/06/1998	Stream	P	0	0	0	20,000	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
08/14/1998	Stream	F	0	0	0	21,000	500	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/27/1998	Stream	G	0	0	0	17,000	0	LOTS OF CARCASSES
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/04/1998	Stream	F	0	0	8,000	0	0	COHO SURVEY
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
Mitrofania Bay, 273-720								
07/17/1998	Stream	P	0	0	0	0	0	
Dave Sarafin	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
07/27/1998	Stream	P	0	0	0	100	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	0	30	
David Owen	Mouth	E	0	0	0	0	0	
	Bay	E	0	0	0	0	0	
08/06/1998	Stream	P	0	0	0	500	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	

-Continued-

Table 48. (page 24 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/14/1998	Stream	G	0	0	0	500	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/27/1998	Stream	G	0	0	0	1,400	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	0	0	COHO SURVEY STILL TOO
David Owen	Mouth	G	0	0	0	0	0	MANY PINKS IN STREAM TO
	Bay	G	0	0	0	0	0	SEE COHO
Ivan River, 273-722								
07/11/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
07/17/1998	Stream	P	0	0	0	0	0	
Dave Sarafin	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
07/26/1998	Stream	G	0	0	0	0	500	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	4,000	0	
07/27/1998	Stream	G	0	0	0	0	800	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	14,000	25	
David Owen	Mouth	E	0	0	0	8,000	0	
	Bay	E	0	0	0	0	0	
08/06/1998	Stream	P	0	0	0	17,000	0	
David Owen	Mouth	P	0	0	0	10,000	0	
	Bay	P	0	0	0	0	0	
08/14/1998	Stream	G	0	0	0	70,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/27/1998	Stream	G	0	0	0	45,000	500	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	0	0	COHO SURVEY
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Fishrack Bay, 273-723								
07/17/1998	Stream	P	0	0	0	0	0	BALL OF PINKS(?) IN
Dave Sarafin	Mouth	P	0	0	0	0	0	FISHRACK BAY 10,000 - 20,000?
	Bay	P	0	0	0	0	0	
07/27/1998	Stream	G	0	0	0	0	100	
David Owen	Mouth	G	0	0	0	0	500	
	Bay	G	0	0	0	10,000	0	
07/31/1998	Stream	E	0	0	0	0	0	
David Owen	Mouth	E	0	0	0	5,000	0	
	Bay	E	0	0	0	0	0	

-Continued-

Table 48. (page 25 of 36)

Stream Date	Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/06/1998		Stream	P	0	0	0	1,500	0	
	David Owen	Mouth	P	0	0	0	0	0	
		Bay	P	0	0	0	0	0	
08/14/1998		Stream	G	0	0	0	1,000	0	
	David Owen	Mouth	G	0	0	0	200	0	
		Bay	G	0	0	0	0	0	
08/27/1998		Stream	G	0	0	0	500	0	
	David Owen	Mouth	G	0	0	0	500	0	
		Bay	G	0	0	0	0	0	
09/04/1998		Stream	G	0	0	0	500	0	COHO SURVEY NEW FISH
	David Owen	Mouth	G	0	0	0	0	0	4000 TOTAL
		Bay	G	0	0	0	0	0	
Foot Creek, 273-802									
07/11/1998		Stream	F	0	0	0	0	0	
	David Owen	Mouth	F	0	0	0	0	0	
		Bay	F	0	0	0	0	0	
07/17/1998		Stream	P	0	0	0	0	0	
	Dave Sarafin	Mouth	P	0	0	0	0	0	
		Bay	P	0	0	0	0	0	
07/27/1998		Stream	G	0	0	0	0	200	
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	
07/31/1998		Stream	E	0	0	0	0	5	
	David Owen	Mouth	E	0	0	0	500	0	
		Bay	E	0	0	0	0	0	
08/06/1998		Stream	P	0	0	0	0	0	REALLY DARK.
	David Owen	Mouth	P	0	0	0	0	0	
		Bay	P	0	0	0	0	0	
08/14/1998		Stream	G	0	0	0	5,000	0	
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	
08/27/1998		Stream	G	0	0	0	4,000	0	
	David Owen	Mouth	G	0	0	0	500	0	
		Bay	G	0	0	0	0	0	
09/04/1998		Stream	G	0	0	0	100	0	COHO SURVEY NEW FISH
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	
Windy Creek, 273-821									
07/17/1998		Stream	P	0	0	0	0	0	
	Dave Sarafin	Mouth	P	0	0	0	0	0	
		Bay	P	0	0	0	0	0	
07/26/1998		Stream	G	0	0	0	0	0	
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	2,000	0	
07/31/1998		Stream	E	0	0	0	0	0	
	David Owen	Mouth	E	0	0	0	0	0	
		Bay	E	0	0	0	0	0	

-Continued-

Table 48. (page 26 of 36)

Stream Date	Observer	Location	Visibility	Species: Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
08/06/1998		Stream	P	0	0	0	0	0	
	David Owen	Mouth	P	0	0	0	0	0	
		Bay	P	0	0	0	0	0	
08/14/1998		Stream	G	0	0	0	200	0	
	David Owen	Mouth	G	0	0	0	200	0	
		Bay	G	0	0	0	0	0	
08/27/1998		Stream	G	0	0	0	50	0	
	David Owen	Mouth	G	0	0	0	200	0	
		Bay	G	0	0	0	0	0	
09/04/1998		Stream	G	0	0	0	50	0	COHO SURVEY
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	
273-822									
07/27/1998		Stream	G	0	0	0	0	25	
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	
08/06/1998		Stream	P	0	0	0	0	0	
	David Owen	Mouth	P	0	0	0	0	0	
		Bay	P	0	0	0	0	0	
08/14/1998		Stream	G	0	0	0	0	0	
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	
09/04/1998		Stream	G	0	0	0	0	0	COHO SURVEY
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	
Spoon Creek, 273-823									
07/11/1998		Stream	F	0	0	0	0	0	
	David Owen	Mouth	F	0	0	0	0	0	
		Bay	F	0	0	0	0	0	
07/17/1998		Stream	P	0	0	0	0	0	
	Dave Sarafin	Mouth	P	0	0	0	0	0	
		Bay	P	0	0	0	0	0	
07/31/1998		Stream	E	0	0	0	0	3	
	David Owen	Mouth	E	0	0	0	500	0	
		Bay	E	0	0	0	0	0	
08/06/1998		Stream	P	0	0	0	500	0	
	David Owen	Mouth	P	0	0	0	200	0	
		Bay	P	0	0	0	0	0	
08/14/1998		Stream	G	0	0	0	200	100	
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	
08/27/1998		Stream	G	0	0	0	700	0	
	David Owen	Mouth	G	0	0	0	1,000	0	
		Bay	G	0	0	0	0	0	
09/04/1998		Stream	G	0	0	0	0	0	COHO SURVEY
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 27 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
Portage Creek, 273-842								
07/11/1998	Stream	F	0	0	0	0	100	
David Owen	Mouth	F	0	0	0	0	3,000	
	Bay	F	0	0	0	0	0	
07/17/1998	Stream	P	0	0	0	0	0	
Dave Sarafin	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
07/26/1998	Stream	G	0	0	0	0	100	
David Owen	Mouth	G	0	0	0	0	10,000	
	Bay	G	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	0	1,000	
David Owen	Mouth	E	0	0	0	0	5,000	
	Bay	E	0	0	0	0	0	
08/06/1998	Stream	P	0	0	0	0	5,000	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
08/14/1998	Stream	G	0	0	0	0	5,000	
David Owen	Mouth	G	0	0	0	0	7,500	
	Bay	G	0	0	0	0	0	
08/27/1998	Stream	G	0	0	0	0	7,000	
David Owen	Mouth	G	0	0	0	0	5,000	
	Bay	G	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	0	3,000	COHO SURVEY NEW FISH
David Owen	Mouth	G	0	0	0	0	5,000	
	Bay	G	0	0	0	0	0	
Seal Bay, 273-843								
07/17/1998	Stream	P	0	0	0	0	25	
Dave Sarafin	Mouth	P	0	0	0	0	25	
	Bay	P	0	0	0	0	0	
07/26/1998	Stream	G	0	0	0	0	1	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	1,000	
07/31/1998	Stream	E	0	0	0	0	200	
David Owen	Mouth	E	0	0	0	0	2,000	
	Bay	E	0	0	0	0	0	
08/06/1998	Stream	P	0	0	0	0	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
08/14/1998	Stream	G	0	0	0	0	1,000	
David Owen	Mouth	G	0	0	0	0	1,200	
	Bay	G	0	0	0	0	0	
08/27/1998	Stream	G	0	0	0	0	4,000	
David Owen	Mouth	G	0	0	0	0	1,000	
	Bay	G	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	0	100	COHO SURVEY
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 28 of 36)

Stream Date	Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks	
Seal Bay, 273-844										
07/17/1998		Stream	P	0	0	0	0	0		
	Dave Sarafin	Mouth	P	0	0	0	0	0		
		Bay	P	0	0	0	0	0		
07/26/1998		Stream	G	0	0	0	0	0		
	David Owen	Mouth	G	0	0	0	0	0		
		Bay	G	0	0	0	0	0		
07/31/1998		Stream	E	0	0	0	0	0		
	David Owen	Mouth	E	0	0	0	0	200		
		Bay	E	0	0	0	0	0		
08/06/1998		Stream	P	0	0	0	0	1,200		
	David Owen	Mouth	P	0	0	0	0	0		
		Bay	P	0	0	0	0	0		
08/14/1998		Stream	G	0	0	0	0	0		
	David Owen	Mouth	G	0	0	0	0	500		
		Bay	G	0	0	0	0	0		
08/27/1998		Stream	G	0	0	0	0	250		
	David Owen	Mouth	G	0	0	0	0	350		
		Bay	G	0	0	0	0	0		
09/04/1998		Stream	G	0	0	0	0	100	COHO SURVEY	
	David Owen	Mouth	G	0	0	0	0	0		
		Bay	G	0	0	0	0	0		
Dog Bay, 273-845										
07/17/1998		Stream	P	0	0	0	0	0		
	Dave Sarafin	Mouth	P	0	0	0	0	0		
		Bay	P	0	0	0	0	0		
07/26/1998		Stream	G	0	0	0	0	0		
	David Owen	Mouth	G	0	0	0	0	0		
		Bay	G	0	0	0	0	0		
07/31/1998		Stream	E	0	0	0	0	200		
	David Owen	Mouth	E	0	0	0	0	500		
		Bay	E	0	0	0	0	0		
08/06/1998		Stream	P	0	0	0	0	200		
	David Owen	Mouth	P	0	0	0	0	0		
		Bay	P	0	0	0	0	0		
08/14/1998		Stream	G	0	0	0	0	800		
	David Owen	Mouth	G	0	0	0	0	0		
		Bay	G	0	0	0	0	10		
08/27/1998		Stream	G	0	0	0	0	250		
	David Owen	Mouth	G	0	0	0	0	250		
		Bay	G	0	0	0	0	0		
09/04/1998		Stream	G	0	0	0	0	2,500	COHO SURVEY	NEW FISH?
	David Owen	Mouth	G	0	0	0	0	0		
		Bay	G	0	0	0	0	0		

-Continued-

Table 48. (page 29 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
Castle Creek, 273-941								
07/17/1998	Stream	P	0	0	0	0	0	SEALS AT MOUTH, BUT
Dave Sarafin	Mouth	P	0	0	0	0	0	COULD NOT SEE FISH.
	Bay	P	0	0	0	0	0	
07/27/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	0	0	
David Owen	Mouth	E	0	0	0	0	300	
	Bay	E	0	0	0	0	0	
08/06/1998	Stream	P	0	0	0	0	0	
David Owen	Mouth	P	0	0	0	1,000	0	
	Bay	P	0	0	0	0	0	
08/11/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	15,000	500	
	Bay	G	0	0	0	0	0	
08/20/1998	Stream	P	0	0	0	200	0	
David Owen	Mouth	P	0	0	0	2,000	200	
	Bay	P	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	4,500	0	COHO SURVEY
David Owen	Mouth	G	0	0	0	200	0	
	Bay	G	0	0	0	0	0	
Hag Creek, 275-400								
07/17/1998	Stream	F	0	0	0	0	0	
Dave Sarafin	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
07/27/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	0	0	
David Owen	Mouth	E	0	0	0	500	0	
	Bay	E	0	0	0	0	0	
08/06/1998	Stream	P	0	0	0	0	0	
David Owen	Mouth	P	0	0	0	200	0	
	Bay	P	0	0	0	0	0	
08/14/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	1,000	0	
	Bay	G	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	0	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	500	0	0	
Kupreanof Peninsula, 275-401								
07/17/1998	Stream	F	0	0	0	100	0	
Dave Sarafin	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	

-Continued-

Table 48. (page 30 of 36)

Stream Date	Observer	Location	Visibility	Species: Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks	
07/27/1998		Stream	G	0	0	0	0	200		
	David Owen	Mouth	G	0	0	0	2,000	2,000		
		Bay	G	0	0	0	0	0		
07/31/1998		Stream	E	0	0	0	1,000	1,200		
	David Owen	Mouth	E	0	0	0	5,000	0		
		Bay	E	0	0	0	0	0		
08/06/1998		Stream	P	0	0	0	3,000	500		
	David Owen	Mouth	P	0	0	0	0	200		
		Bay	P	0	0	0	0	0		
08/14/1998		Stream	G	0	0	0	7,000	10		
	David Owen	Mouth	G	0	0	0	0	0		
		Bay	G	0	0	0	0	0		
08/27/1998		Stream	G	0	0	0	9,000	0	CARCASSES	
	David Owen	Mouth	G	0	0	0	0	0		
		Bay	G	0	0	0	0	0		
09/04/1998		Stream	G	0	0	0	2,000	0	COHO SURVEY	NEW FISH
	David Owen	Mouth	G	0	0	0	0	0		
		Bay	G	0	0	0	0	0		
Smokey Hollow Creek, 275-402										
07/17/1998		Stream	P	0	0	0	0	250		
	Dave Sarafin	Mouth	P	0	0	0	0	0		
		Bay	P	0	0	0	0	0		
07/27/1998		Stream	G	0	0	0	0	1,500		
	David Owen	Mouth	G	0	0	0	0	1,000		
		Bay	G	0	0	0	0	0		
07/31/1998		Stream	E	0	0	0	0	1,000		
	David Owen	Mouth	E	0	0	0	0	1,000		
		Bay	E	0	0	0	0	0		
08/06/1998		Stream	P	0	0	0	0	1,000		
	David Owen	Mouth	P	0	0	0	0	200		
		Bay	P	0	0	0	0	0		
08/14/1998		Stream	G	0	0	0	200	180		
	David Owen	Mouth	G	0	0	0	0	0		
		Bay	G	0	0	0	0	0		
08/27/1998		Stream	G	0	0	0	0	750		
	David Owen	Mouth	G	0	0	0	1,000	0		
		Bay	G	0	0	0	0	0		
09/04/1998		Stream	G	0	0	0	500	500	COHO SURVEY	NEW FISH
	David Owen	Mouth	G	0	0	100	0	300		
		Bay	G	0	0	0	0	0		
Ivanof Bay, 275-403										
07/17/1998		Stream	P	0	0	0	0	0		
	Dave Sarafin	Mouth	P	0	0	0	0	0		
		Bay	P	0	0	0	0	0		

-Continued-

Table 48. (page 31 of 36)

Stream Date	Observer	Location	Visibility	Species: Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
Wasco's Creek, 275-404									
07/11/1998		Stream	G	0	0	0	0	200	
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	
07/11/1998		Stream	G	0	0	0	0	200	
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	
07/17/1998		Stream	P	0	0	0	0	0	
	Dave Sarafin	Mouth	P	0	0	0	0	0	
		Bay	P	0	0	0	0	0	
07/27/1998		Stream	P	0	0	0	0	0	
	David Owen	Mouth	P	0	0	0	0	0	
		Bay	P	0	0	0	0	0	
07/31/1998		Stream	E	0	0	0	0	600	
	David Owen	Mouth	E	0	0	0	0	2,000	
		Bay	E	0	0	0	0	0	
08/06/1998		Stream	P	0	0	0	0	0	TOO DARK TO EFFECTIVELY
	David Owen	Mouth	P	0	0	0	0	0	SURVEY.
		Bay	P	0	0	0	0	0	
08/14/1998		Stream	G	0	0	0	10,000	0	ESCAPED
	David Owen	Mouth	G	0	0	0	4,000	0	
		Bay	G	0	0	0	0	0	
08/27/1998		Stream	G	0	0	0	13,000	0	
	David Owen	Mouth	G	0	0	1,000	25	0	
		Bay	G	0	0	0	0	0	
09/04/1998		Stream	G	0	0	50	0	0	COHO SURVEY NEW FISH
	David Owen	Mouth	G	0	0	1,000	0	0	
		Bay	G	0	0	0	0	0	
Sunnyside Creek, 275-405									
07/17/1998		Stream	P	0	0	0	0	0	
	Dave Sarafin	Mouth	P	0	0	0	0	0	
		Bay	P	0	0	0	0	0	
07/27/1998		Stream	G	0	0	0	0	0	
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	
07/31/1998		Stream	E	0	0	0	0	0	
	David Owen	Mouth	E	0	0	0	0	0	
		Bay	E	0	0	0	0	0	
08/06/1998		Stream	P	0	0	0	0	5	
	David Owen	Mouth	P	0	0	0	0	0	
		Bay	P	0	0	0	0	0	
08/14/1998		Stream	G	0	0	0	10	0	
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	
08/27/1998		Stream	G	0	0	0	0	50	
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 32 of 36)

Stream Date Observer	Location	Visi-bility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
09/04/1998	Stream	G	0	0	0	100	200	COHO SURVEY NEW FISH
David Owen	Mouth	G	0	0	1,000	0	200	
	Bay	G	0	0	0	0	0	
Ivanof River, 275-406								
06/28/1998	Stream	E	0	0	0	0	20	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	75,000	
06/30/1998	Stream	F	0	0	0	0	5,000	
David Owen	Mouth	F	0	0	0	0	75,000	
	Bay	F	0	0	0	0	30,000	
07/01/1998	Stream	E		0	0	0	5,000	
David Owen	Mouth	E		0	0	0	0	
	Bay	E		0	0	0	75,000	
07/03/1998	Stream	P	0	0	0	0	7,000	
David Owen	Mouth	P	0	0	0	0	70,000	
	Bay	P	0	0	0	0	25,000	
07/11/1998	Stream	G	0	0	0	0	40,000	
David Owen	Mouth	G	0	0	0	0	25,000	
	Bay	G	0	0	0	0	20,000	
07/17/1998	Stream	P	0	0	0	0	20,000	POOR VISIBILITY. COULD BE
Dave Sarafin	Mouth	P	0	0	0	0	15,000	MORE FISH THAN
	Bay	P	0	0	0	0	0	ESTIMATED.
07/27/1998	Stream	G	0	0	0	0	45,000	
David Owen	Mouth	G	0	0	0	0	100,000	
	Bay	G	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	0	55,000	
David Owen	Mouth	E	0	0	0	0	100,000	
	Bay	E	0	0	0	0	0	
08/06/1998	Stream	P	0	0	0	0	62,000	LOTS OF JUMPERS, (LOOK
David Owen	Mouth	P	0	0	0	0	50,000	FRESH).
	Bay	P	0	0	0	0	0	
08/14/1998	Stream	G	0	0	0	20,000	65,000	CHUM 12000 3000
David Owen	Mouth	G	0	0	0	100,000	30,000	PINKS 11000 3000
	Bay	G	0	0	0	100,000	0	
08/27/1998	Stream	G	0	0	0	125,000	25,000	CARCASSES
David Owen	Mouth	G	0	0	20,000	0	0	
	Bay	G	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	0	25,000	COHO SURVEY NEW FISH
David Owen	Mouth	G	0	0	40,000	15,000	25,000	ONLY
	Bay	G	0	0	0	0	0	
Wolverine Cove, 275-408								
07/17/1998	Stream	P	0	0	0	0	0	SOME FISH AT MOUTH.
Dave Sarafin	Mouth	P						VISIBILITY TOO POOR TO
	Bay	P	0	0	0	0	0	ESTIMATE OR SPECIATE.
07/27/1998	Stream	G	0	0	0	50	0	
David Owen	Mouth	G	0	0	0	1,000	0	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 33 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks	
07/31/1998	Stream	E	0	0	0	0	0		
David Owen	Mouth	E	0	0	0	1,200	0		
	Bay	E	0	0	0	0	0		
08/06/1998	Stream	P	0	0	0	1,000	0		
David Owen	Mouth	P	0	0	0	2,000	0		
	Bay	P	0	0	0	0	0		
08/14/1998	Stream	G	0	0	0	2,000	0		
David Owen	Mouth	G	0	0	0	1,000	0		
	Bay	G	0	0	0	0	0		
08/27/1998	Stream	G	0	0	0	1,000	0		
David Owen	Mouth	G	0	0	0	500	0		
	Bay	G	0	0	0	0	0		
09/04/1998	Stream	G	0	0	0	500	0	COHO SURVEY	NEW FISH
David Owen	Mouth	G	0	0	0	50	0		
	Bay	G	0	0	0	0	0		
Humpback Creek, 275-502									
07/11/1998	Stream	F	0	0	0	0	200		
David Owen	Mouth	F	0	0	0	0	0		
	Bay	F	0	0	0	0	0		
07/17/1998	Stream	P	0	0	0	200	0		
Dave Sarafin	Mouth	P	0	0	0	0	0		
	Bay	P	0	0	0	0	0		
07/27/1998	Stream	G	0	0	0	5,000	1,000		
David Owen	Mouth	G	0	0	0	4,000	0		
	Bay	G	0	0	0	0	0		
07/31/1998	Stream	E	0	0	0	8,000	200		
David Owen	Mouth	E	0	0	0	5,000	0		
	Bay	E	0	0	0	0	0		
08/06/1998	Stream	P	0	0	0	10,000	0		
David Owen	Mouth	P	0	0	0	20,000	0		
	Bay	P	0	0	0	0	0		
08/14/1998	Stream	G	0	0	0	20,000	0		
David Owen	Mouth	G	0	0	0	25,000	0		
	Bay	G	0	0	0	0	0		
08/27/1998	Stream	G	0	0	0	19,000	0		
David Owen	Mouth	G	0	0	0	200	0		
	Bay	G	0	0	0	0	0		
09/04/1998	Stream	G	0	0	50	2,000	0	COHO SURVEY	NEW FISH
David Owen	Mouth	G	0	0	0	0	0		
	Bay	G	0	0	0	0	0		
Humpback Bay, 275-503									
07/17/1998	Stream	P	0	0	0	0	0		
Dave Sarafin	Mouth	P	0	0	0	0	0		
	Bay	P	0	0	0	0	0		
07/27/1998	Stream	G	0	0	0	0	0		
David Owen	Mouth	G	0	0	0	0	0		
	Bay	G	0	0	0	0	0		

-Continued-

Table 48. (page 34 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks	
07/31/1998	Stream	E	0	0	0	0	0		
David Owen	Mouth	E	0	0	0	0	0		
	Bay	E	0	0	0	1,000	0		
08/06/1998	Stream	P	0	0	0	0	0		
David Owen	Mouth	P	0	0	0	0	0		
	Bay	P	0	0	0	0	0		
08/14/1998	Stream	G	0	0	0	0	0		
David Owen	Mouth	G	0	0	0	0	0		
	Bay	G	0	0	0	0	0		
09/04/1998	Stream	G	0	0	0	0	0	COHO SURVEY	
David Owen	Mouth	G	0	0	0	0	0		
	Bay	G	0	0	0	0	0		
Humpback Bay Creek, 275-504									
06/30/1998	Stream	F	0	0	0	0	0		
David Owen	Mouth	F	0	0	0	0	0		
	Bay	F	0	0	0	0	0		
07/11/1998	Stream	F	0	0	0	0	0		
David Owen	Mouth	F	0	0	0	0	25		
	Bay	F	0	0	0	0	0		
07/17/1998	Stream	P	0	0	0	0	0		
Dave Sarafin	Mouth	P	0	0	0	0	0		
	Bay	P	0	0	0	0	0		
07/27/1998	Stream	G	0	0	0	0	0		
David Owen	Mouth	G	0	0	0	1,000	0		
	Bay	G	0	0	0	0	0		
07/31/1998	Stream	E	0	0	0	0	0		
David Owen	Mouth	E	0	0	0	2,000	0		
	Bay	E	0	0	0	0	0		
08/06/1998	Stream	P	0	0	0	2,000	0		
David Owen	Mouth	P	0	0	0	2,500	0		
	Bay	P	0	0	0	0	0		
08/14/1998	Stream	G	0	0	0	0	0		
David Owen	Mouth	G	0	0	0	0	0		
	Bay	G	0	0	0	0	0		
08/27/1998	Stream	G	0	0	0	100	0		
David Owen	Mouth	G	0	0	0	1,000	0		
	Bay	G	0	0	0	0	0		
09/04/1998	Stream	G	0	0	0	0	0	COHO SURVEY	NEW FISH
David Owen	Mouth	G	0	0	0	10	0		
	Bay	G	0	0	0	0	0		
Alexander Point, 275-505									
07/17/1998	Stream	P	0	0	0	0	0		
Dave Sarafin	Mouth	P	0	0	0	0	0		
	Bay	P	0	0	0	0	0		
07/27/1998	Stream	G	0	0	0	200	0		
David Owen	Mouth	G	0	0	0	1,200	0		
	Bay	G	0	0	0	0	0		

-Continued-

Table 48. (page 35 of 36)

Stream Date Observer	Location	Visibility	Species Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
07/31/1998	Stream	E	0	0	0	8,000	500	
David Owen	Mouth	E	0	0	0	0	0	
	Bay	E	0	0	0	0	0	
08/14/1998	Stream	G	0	0	0	4,000	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
08/27/1998	Stream	G	0	0	0	1,000	0	
David Owen	Mouth	G	0	0	0	1,000	0	
	Bay	G	0	0	0	0	0	
09/04/1998	Stream	G	0	0	0	2,000	0	COHO SURVEY NEW FISH
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Kametolook River, 275-600								
07/17/1998	Stream	P	0	0	0	0	0	
Dave Sarafin	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
07/27/1998	Stream	P	0	0	0	0	4	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	0	25	
David Owen	Mouth	E	0	0	0	0	0	
	Bay	E	0	0	0	0	0	
08/06/1998	Stream	P	0	0	0	0	0	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
08/27/1998	Stream	G	0	0	0	700	0	
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	
Kametolook River (n), 275-601								
07/11/1998	Stream	F	0	0	0	0	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
07/17/1998	Stream	P						VISIBILITY TOO POOR TO
Dave Sarafin	Mouth	P						ESTIMATE.
	Bay	P						
07/27/1998	Stream	P	0	0	0	0	100	
David Owen	Mouth	P	0	0	0	0	0	
	Bay	P	0	0	0	0	0	
07/31/1998	Stream	E	0	0	0	0	200	
David Owen	Mouth	E	0	0	0	3,000	0	
	Bay	E	0	0	0	0	0	
08/14/1998	Stream	F	0	0	0	200	0	
David Owen	Mouth	F	0	0	0	0	0	
	Bay	F	0	0	0	0	0	
08/27/1998	Stream	G	0	0	15	8,000	100	LOTS OF CARCASSES
David Owen	Mouth	G	0	0	0	0	0	
	Bay	G	0	0	0	0	0	

-Continued-

Table 48. (page 36 of 36)

Stream Date	Observer	Location	Visibility	Species: Chinook	Sockeye	Coho	Pink	Chum	Observer Remarks
09/04/1998		Stream	G	0	0	0	0	0	COHO SURVEY
	David Owen	Mouth	G	0	0	0	0	0	
		Bay	G	0	0	0	0	0	

Table 49. Pink and chum salmon escapement estimates (in thousands of fish) for select Chignik Management Area streams, 1953-1998 .[a,b]

	Thompson Valley		Hook Bay		Cape Kumlik		Bear Cr.	
	272-204		272-302		272-501		272-505	
Year	Pink	Chum	Pink	Chum	Pink	Chum	Pink	Chum
1953	25.3	0.0	13.0	6.3			0.0	0.7
1954	28.2	4.5	14.3	5.3			0.2	0.2
1955	115.0	3.0	78.0	0.0			1.0	0.0
1956								
1957								
1958								
1959								
1960								
1961								
1962	7.0	0.0	18.9	4.1	7.0	0.0	0.0	12.4
1963	23.3	0.0	33.0	7.5	23.0	0.0	0.0	9.5
1964	4.1	0.0	42.0	1.2	8.7	0.0	0.0	8.8
1965	9.4	0.0	23.3	2.1	13.7	0.0	0.0	8.5
1966	4.1	0.0	10.0	0.5	3.8	0.0	0.0	4.3
1967	2.0	0.4	7.3	2.5	5.2	0.0	0.0	8.0
1968			5.0	0.0			0.0	2.7
1969	19.0	0.0	30.0	0.0			0.0	4.5
1970	12.0	0.0	11.0	1.0	5.0	0.0	0.0	10.0
1971	7.5	0.0	13.0	8.0	51.0	0.0	0.0	10.0
1972	0.2	0.0	0.4	1.1	0.2	0.0	0.0	2.5
1973	2.3	0.2	4.9	4.7	40.0	0.0	0.0	4.0
1974	1.6	0.1	3.8	0.8	0.6	0.0	0.0	2.3
1975	10.2	0.0	1.3	6.0	17.8	0.0	0.0	1.5
1976	5.5	0.2	8.0	2.5	2.6	0.0	0.0	1.4
1977	29.4	0.0	22.6	2.0	124.0	0.0	0.5	2.6
1978	14.0	0.0	14.5	2.8	6.1	0.0	0.1	1.5
1979	35.5	1.0	42.7	11.0	153.0	0.0	0.0	5.0
1980	0.7	0.0	24.5	4.2	2.6	0.0	0.2	0.0
1981	6.5	0.5	13.9	9.0	36.2	0.0	0.1	0.0
1982	1.2	0.0	7.3	10.0	0.9	0.0	0.0	2.5
1983	2.3	0.0	0.2	0.3	0.0	0.0	2.0	7.9
1984	14.0	0.0	16.2	0.1	3.7	0.0	0.3	2.3
1985	0.0	0.0	2.0	0.0			0.0	7.2
1986	0.3	0.0	66.9	0.0	38.2	0.0	0.0	7.5
1987			9.5	0.3	46.9	0.3	0.0	12.0
1988	9.6	3.3	26.4	0.7	18.0	0.0	0.0	0.7
1989	16.6	3.7	45.5	10.2	63.0	0.0	0.0	3.6
1990	4.8	0.0	16.7	0.2	3.2	0.0	0.3	T
1991	0.0	0.0	0.0	0.0	109.7	0.0	0.0	0.9
1992	61.2	0.0	7.2	7.5	15.4	0.0	0.0	20.8
1993	0.0	19.0	26.2	9.3	82.0	0.0	0.0	1.4
1994	48.0	4.0	21.5	8.9	21.0	0.0	0.0	22.0
1995	8.3	0.0	61.4	0.6	252.4	0.0	6.0	10.1
1996	38.2	6.0	42.9	2.0	7.2	0.0	0.2	7.2
1997	48.7	0.2	29.9	2.9	285.8	0.0	2.0	21.7
1998	46.1	0.0	28.4	0.5	2.0	0.0	6.0	5.6

-Continued-

Table 49. (page 2 of 8)

Year	Rudys Cr. 272-509 Pink	Rudys Cr. 272-509 Chum	North Fork 272-514 Pink	North Fork 272-514 Chum	Aniakchak R. 272-605 Pink	Aniakchak R. 272-605 Chum	Cape Agutka 272-606 Pink	Cape Agutka 272-606 Chum
1953	0.7	0.2	1.3	3.5	0.0	35.0	0.2	0.7
1954			55.0	4.6	100.0	37.2	3.9	1.5
1955	15.0	4.0	13.5	1.0	16.0	0.0	1.2	0.0
1956								
1957								
1958								
1959								
1960								
1961								
1962	4.5	5.2	34.0	0.8	126.0	25.0	17.6	0.5
1963	0.0	12.0	9.7	1.8	6.0	14.6	0.4	0.0
1964	0.5	5.0	68.0	3.0	175.0	82.5	11.0	1.1
1965	0.0	1.1	8.7	2.0	10.8	4.0	5.1	0.1
1966	2.0	3.0	2.0		90.8	9.0	7.7	0.2
1967	1.0	3.0	20.0	1.1	2.0	10.5	1.1	0.1
1968	2.0	7.0	26.0	0.0	85.0	10.0	22.3	0.0
1969	0.2	1.0	5.2	4.0	0.1	0.5	4.6	2.0
1970	0.0	3.0	24.0	8.0	40.0	30.5	10.0	2.0
1971	0.0	1.3	0.0	4.5	0.0	11.5	2.0	3.0
1972	0.2	1.7	1.7	6.9	1.8	7.1	2.5	1.5
1973	0.0	1.2	2.8	1.5	2.7	4.0	1.5	1.8
1974	0.8	4.2	2.5	4.2	29.8	25.7	1.6	0.0
1975	0.0	1.8	0.4	3.7	2.4	5.5	1.9	0.2
1976	6.2	3.7	17.5	7.9	165.0	34.0	5.9	0.8
1977	6.3	0.9	6.6	2.3	3.0	14.8	1.0	0.1
1978	4.0	2.2	46.0	6.9	215.5	23.2	8.0	0.2
1979	12.0	7.7	12.7	5.6	0.0	0.2	13.0	1.5
1980	9.3	0.0	38.5	29.5	40.0	43.0	20.0	5.5
1981	0.7	0.1	15.8	16.5	2.7	32.0	5.8	0.0
1982	0.2	8.7	19.0	3.5	130.0	47.0	21.0	0.0
1983	0.0	1.3	4.1	1.3	1.0	3.1	0.1	0.0
1984	4.5	5.0	32.4	17.4	56.4	47.0	17.2	1.2
1985	0.0	0.0	4.7	1.3	0.0	0.0	0.0	0.0
1986	38.0	10.9	34.3	5.0	1.5	0.5	65.0	0.4
1987	0.0	0.0	8.8	4.0	2.5	0.3	4.2	0.3
1988	34.9	16.6	48.5	17.0	95.1	17.4	84.4	0.0
1989	7.3	0.4	23.0	1.2	5.0	2.5	1.8	0.0
1990	8.0	1.3	40.9	0.7	19.7	11.6	46.5	0.0
1991	0.0	7.4	2.1	2.9	0.0	7.6	4.1	0.0
1992	15.0	48.2	42.3	59.7	96.6	53.8	161.9	16.8
1993	3.7	0.0	24.5	8.0	0.0	7.8	53.0	T
1994	4.0	35.0	31.0	5.2	60.0	40.0	35.0	0.0
1995	49.0	2.5	84.5	15.0	70.0	50.0	91.1	0.0
1996	22.9	5.3	63.9	11.0	198.0	51.5	82.6	0.0
1997	20.0	5.3	33.0	8.8	167.1	8.2	39.8	2.5
1998	17.0	11.9	53.6	9.1	165.7	72.3	64.2	0.0

-Continued-

Table 49. (page 3 of 8)

Year	Main Cr. 272-702 Pink	Main Cr. 272-702 Chum	Northeast Cr. 272-703 Pink	Northeast Cr. 272-703 Chum	Yantarni R. 272-721 Pink	Yantarni R. 272-721 Chum	Ocean Beach 272-801 Pink	Ocean Beach 272-801 Chum
1953	0.2	17.0	3.5	2.0				
1954	6.9	21.5	1.1	0.8				
1955	25.2	0.8			7.5	7.0	8.0	3.0
1956								
1957								
1958								
1959								
1960								
1961								
1962	33.0	3.6	1.6	2.5	52.5	0.1	45.0	2.0
1963	16.0	5.8	5.0	0.9	16.0	0.3	3.4	0.0
1964	40.5		2.3	3.0	42.0	21.0	34.6	10.1
1965	5.0	4.8	2.3	6.0	4.0	7.6	0.4	1.0
1966	3.0	0.0	1.3	0.2	18.5	5.0	11.0	3.3
1967	16.5	2.0	2.0	0.2				
1968	28.0	8.0	7.7	1.0	25.0	6.5	26.5	0.0
1969	3.0	15.0	7.0	4.5	1.5	11.0	6.0	3.5
1970	13.0	7.0	7.0	6.0	1.5	11.5	7.5	5.0
1971	1.0	20.0	2.0	5.5	0.0	18.0	0.0	3.5
1972	2.0	8.0	1.7	0.5	2.1	21.0	0.5	4.6
1973	1.0	7.0	1.1	3.1	0.3	6.5	0.6	1.7
1974	6.6	6.3	3.0	2.0	3.7	3.8	2.3	2.2
1975	4.7	8.0	0.4	0.7	0.3	1.6	0.8	0.2
1976	5.5	8.5	3.8	2.0	5.8	12.5	4.2	3.0
1977	4.5	3.5	10.0	0.8	1.9	3.5	1.1	0.4
1978	5.6	7.6	4.4	4.6	7.9	3.3	7.1	0.5
1979	13.5	14.0	7.0	7.5	14.0	9.5	1.5	0.0
1980	53.5	17.0	4.8	3.0	60.0	11.0	27.6	0.0
1981	6.3	16.3	5.9	2.5	13.5	18.2	10.5	5.5
1982	36.0	12.3	6.2	3.7	8.5	25.5	0.0	14.5
1983	9.2	6.7	3.2	4.7	3.6	13.4	3.1	1.5
1984	15.7	14.5	7.0	4.3	26.5	18.7	19.0	13.2
1985	13.7	4.0	9.0	0.0	67.8	0.7	9.9	0.0
1986	85.0	0.0	13.6	0.0	3.1	0.3	1.8	0.2
1987	14.3	1.5	7.5	0.4	18.0	3.0	13.0	2.7
1988	43.6	5.5	41.4	10.6	33.7	30.3	32.8	12.8
1989	53.0	3.2	17.0	4.0	10.9	3.4	10.9	4.8
1990	54.3	5.7	80.3	13.3	23.6	9.3	45.0	1.3
1991	0.0	8.4	1.9	8.8	5.3	1.7	0.0	2.8
1992	30.3	45.2	31.9	50.5	14.9	26.2	15.6	7.1
1993	26.5	14.0	24.2	0.0			10.0	23.0
1994	30.0	0.5	44.4	6.1	57.3	4.6	42.5	10.0
1995	123.3	9.0	98.7	7.4	54.0	10.0	74.8	3.8
1996	94.8	10.0	68.6	3.0	61.1	5.0	49.5	2.0
1997	85.3	14.4	68.0	16.9	81.3	18.0	80.0	5.2
1998	127	0.5	70.9	0.0	82.5	3.8	70.2	1.1

-Continued-

Table 49. (page 4 of 8)

Year	Nakalilok R. 272-804 Pink	Nakalilok R. 272-804 Chum	Chiginagak 272-902 Pink	Chiginagak 272-902 Chum	Chiginagak R. 272-903A Pink	Chiginagak R. 272-903A Chum	Chiginagak 272-904 Pink	Chiginagak 272-904 Chum
1953								
1954								
1955	3.0	0.5			0.0	15.9		
1956								
1957								
1958								
1959								
1960								
1961								
1962	22.0	0.1	16.0	0.0	0.3	34.3	20.1	0.0
1963	10.4	0.1	1.2	0.0	0.0	15.0	43.0	0.0
1964	89.0	3.0	20.0	0.0	6.0	24.4	41.4	0.0
1965	0.5	9.0	0.4	0.0	0.0	13.8	12.4	0.1
1966	12.5	0.0	5.8	0.0	0.0	33.2	16.0	0.0
1967	3.5	18.5	0.5	0.1	0.0	27.0	12.4	0.0
1968	7.4	2.0	21.0	0.0	2.0	29.5	20.0	0.0
1969	8.0	3.5	1.3	0.0		20.0	6.0	0.0
1970	10.0	6.5	11.0	0.0	0.0	31.0	4.0	0.0
1971	1.0	44.0	2.8	0.0	0.0	86.0	1.1	0.0
1972	0.0	6.0	0.1	0.3	1.0	33.0	0.1	0.1
1973	0.5	5.2	0.3	0.0	0.2	28.3	0.5	0.0
1974	2.2	4.8	0.2	0.2	8.5	28.5	0.9	0.0
1975	3.0	4.8	0.5	0.5	2.9	20.3	0.8	0.0
1976	2.4	14.2	0.7	0.0	0.7	35.0	2.2	0.0
1977	3.8	4.9	2.7	0.0	1.8	19.4	3.8	0.0
1978	8.1	4.2	4.4	0.4	1.3	9.1	3.5	0.0
1979	12.0	2.9	11.0	15.0	0.4	24.3	7.2	0.0
1980	25.6	14.0	17.9	0.0	16.3	5.7	14.5	0.0
1981	6.5	8.0	5.0	0.0	6.0	23.4	6.9	0.0
1982	4.0	12.3	2.2	0.0	2.0	18.5	1.7	0.4
1983	4.8	4.2	0.7	0.0	1.8	9.6	1.9	0.0
1984	15.0	36.5	16.6	0.0	6.9	53.8	19.5	3.0
1985	27.0	0.0	0.0	0.0	1.0	0.0	5.0	0.0
1986	12.7	1.0	42.3	0.0	21.1	3.3	8.9	0.0
1987	1.4	3.8	3.2	0.4	67.5	15.7	11.0	3.3
1988	16.8	8.0	33.7	0.0	12.6	13.2	40.0	30.0
1989	10.6	4.1	22.0	0.0	70.4	4.2	32.0	11.5
1990	47.0	6.3	19.2	0.0	63.0	9.8	18.7	5.0
1991	0.0	4.1	18.6	0.0	0.3	0.0	0.5	5.5
1992	16.7	27.3	27.6	0.6	0.0	4.5	0.1	0.0
1993	30.0	33.0	35.3	0.0	59.8	10.0	59.3	10.0
1994	71.4	6.1	35.0	0.0	35.0	3.0	109.0	5.0
1995	101.0	1.9	63.0	5.0	0.0	0.3	119.1	0.0
1996	71.3	32.1	26.3	0.0	22.0	0.0	32.7	0.0
1997	75.0	62.0	97.9	1.5	56.2	45.1	35.0	10.0
1998	125.4	8.9	19.5	0.1	105.9	7.2	35.0	1.7

-Continued-

Table 49. (page 5 of 8)

Year	Chiginagak 272-905 Pink	Chiginagak 272-905 Chum	Agripina R. 272-961A Pink	Agripina R. 272-961A Chum	Glacier Cr. 272-962 Pink	Glacier Cr. 272-962 Chum	Kilokak 272-963 Pink	Kilokak 272-963 Chum
1953								
1954								
1955					0.0	0.0		
1956								
1957								
1958								
1959								
1960								
1961								
1962	17.1	0.0	12.0	3.0	0.5	3.0	16.2	0.0
1963	1.0	0.0	19.2	0.1	0.0	10.0	0.8	0.0
1964	100.0	0.3	8.5	0.0	0.5	6.0	14.2	0.0
1965	1.2	0.0	20.1	0.0	0.0	1.3	0.1	0.0
1966	90.5	0.0					24.5	0.0
1967	5.8	1.8	7.3	0.5	0.0	5.6	0.3	0.0
1968	53.0	0.0	12.0	0.0	0.0	0.2	65.6	0.0
1969	2.4	0.0	2.5	0.0	0.0	2.0	0.2	0.0
1970	24.0	0.0	15.5	0.0	0.0	5.0	55.0	0.0
1971	4.3	2.0	6.6	0.0	0.0	6.0	0.0	0.0
1972	2.4	0.0	1.6	0.0	0.0	4.6	2.1	0.0
1973	1.0	0.0	4.2	0.5	0.0	3.0	0.1	0.0
1974	1.9	0.0	1.2	0.2	0.0	0.9	0.3	0.0
1975	2.1	0.2	2.7	0.0	0.2	0.5	0.6	0.0
1976	20.1	0.4	4.9	0.0	0.0	1.8	4.9	0.0
1977	22.0	1.3	4.3	0.0	0.0	1.0	0.5	0.0
1978	41.0	0.4	7.4	0.1	0.6	1.1	5.9	0.0
1979	61.1	0.0	23.5	0.0	0.0	1.6	1.1	0.0
1980	38.5	0.0	14.3	0.0	5.2	0.7	61.0	0.0
1981	48.0	0.1	13.4	0.0	0.0	0.6	0.3	0.0
1982	34.1	0.0	33.0	0.0	0.0	1.1	20.0	0.0
1983	3.6	5.0	5.0	0.0	1.3	0.2	0.3	0.0
1984	117.2	0.2	39.8	0.0	1.0	3.2	75.8	0.0
1985	17.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0
1986	85.0	0.1	0.0	0.0	0.0	0.0	175.0	0.0
1987	20.0	0.3	1.0	0.0	6.2	0.0	0.0	0.0
1988	52.9	14.4	78.0	20.6	0.3	0.0	137.8	0.0
1989	89.0	4.0	53.0	0.0	0.3	0.1	10.5	0.0
1990	84.8	2.4	33.3	0.0	1.1	0.2	83.4	0.0
1991	5.2	5.0	9.6	5.0	0.2	1.2	9.7	0.0
1992	137.8	5.1	180.5	5.7	10.4	0.0	157.8	0.0
1993	87.3	10.0	47.2	0.0	0.0	0.0	105.7	0.0
1994	45.0	6.0	65.0	25.0	3.0	0.1	70.0	0.0
1995	8.5	0.0	100.0	4.7	9.0	0.2	29.0	0.0
1996	7.5	0.0	7.0	0.5	6.5	0.5	30.0	0.0
1997	3.5	2.0	56.2	53.0	4.0	11.0	54.0	0.0
1998	11.9	1.0	41.5	T	8.2	1.0	37.3	0.0

-Continued-

Table 49. (page 6 of 8)

Year	Coal Cape 273-702 Pink	Coal Cape 273-702 Chum	Ivan River 273-722 Pink	Ivan River 273-722 Chum	Foot Bay 273-802 Pink	Foot Bay 273-802 Chum	Spoon Cr. 273-823 Pink	Spoon Cr. 273-823 Chum
1953							1.0	1.5
1954								
1955							15.0	0.0
1956								
1957								
1958								
1959								
1960								
1961								
1962	129.0	12.0	85.0	36.0	13.3	1.0	10.6	2.0
1963	127.5	0.0	124.0	4.5	11.0	1.0	3.5	0.0
1964	60.0	10.0	65.5		12.0	0.9	13.2	0.0
1965	48.0	5.9	89.1	0.0	5.3	0.0	1.4	0.0
1966	9.7	2.0	94.5	1.0	18.4	0.2	15.5	0.0
1967	9.0	1.0	35.0	7.0	4.7	0.0	2.4	0.0
1968	39.0		85.0	0.0	14.2	0.0	7.8	0.0
1969	77.0	0.0	302.0	0.0	14.2	0.1	6.5	0.0
1970	69.0	0.0	103.0	17.0	14.5	3.0	10.5	0.0
1971	8.0	0.0	205.0	90.0	30.0	5.2	7.0	0.0
1972	2.5	4.5	4.4	13.0	0.6	0.6	0.2	0.0
1973	1.6	1.0	43.8	17.2	7.5	0.3	0.8	0.2
1974	62.8	5.1	3.9	22.3	2.1	0.3	1.7	0.0
1975	21.0	4.5	96.0	24.5	9.8	0.0	4.5	0.0
1976	70.3	13.4	17.3	22.1	7.0	1.1	9.3	1.9
1977	78.5	0.0	236.0	36.0	18.3	0.8	5.7	0.1
1978	218.5	0.1	73.7	0.8	16.6	2.0	7.5	0.1
1979	50.2	2.0	90.0	32.0	9.6	0.4	7.1	1.0
1980	53.0	12.5	51.0	22.1	3.5	1.0	4.5	0.9
1981	84.9	3.0	117.0	28.0	10.0	4.6	6.7	0.8
1982	30.5	3.3	21.0	16.3	1.4	2.8	0.1	0.4
1983	17.8	0.5	12.2	7.2	1.2	1.1	0.8	0.0
1984	60.2	6.5	103.0	40.0	6.0	1.8	0.3	0.1
1985	3.5	0.5	49.6	23.3	5.9	1.7	0.3	0.0
1986	22.0	0.0	10.1	0.0	4.9	0.0	0.5	0.0
1987	13.4	0.4	14.8	2.4	6.6	1.0	0.0	0.0
1988	135.6	10.6	57.0	5.6	13.0	0.9	3.1	0.3
1989	2.9	1.5	32.0	0.8	10.8	0.6	1.7	0.1
1990	7.5	0.8	23.1	14.3	8.2	0.2	0.8	2.0
1991	53.6	0.0	42.2	3.1	0.0	4.9	0.0	1.7
1992	0.0	0.3	31.4	45.1	1.1	0.0	0.8	0.2
1993	16.1	0.0	17.3	1.7	6.1	0.0	0.3	0.3
1994	17.0	7.5	35.5	0.0	7.0	0.2	0.5	0.5
1995	174.1	0.1	161.2	1.0	19.0	0.0	10.1	0.0
1996	63.4	0.6	105.7	4.2	4.0	0.2	1.1	0.5
1997	79.3	2.0	125.8	12.6	6.0	T	10.5	0.0
1998	31.2	1.3	93.1	0.8	6.3	0.2	0.9	0.1

-Continued-

Year	Portage 273-842 Pink	Portage 273-842 Chum	Seal Bay 273-843 Pink	Seal Bay 273-843 Chum	Kupreanof 275-401 Pink	Kupreanof 275-401 Chum	Smokey Hollow 275-402 Pink	Smokey Hollow 275-402 Chum
1953	5.3	0.5	2.0	2.0				
1954								
1955	0.0	20.0	0.0	0.6				
1956								
1957								
1958								
1959								
1960								
1961								
1962	0.0	23.8	0.0	1.8	12.2	0.0	3.6	3.9
1963	27.0	4.4	6.0	0.0	3.5	0.0	1.5	2.0
1964	0.0	20.4	1.3	0.0	13.0	1.1	0.8	17.0
1965	1.7	8.3	3.3	0.0	3.0	0.0	0.0	0.5
1966	24.4	8.9	4.0	0.0			0.0	7.4
1967	28.5	15.0	6.0	0.5	6.7	0.0	0.0	0.3
1968	3.3	5.0	2.5	0.0	14.0	0.0	0.0	0.9
1969	0.1	27.5	7.5	0.0	6.8	0.2	0.0	0.2
1970	9.0	27.6	5.2	0.0	11.0	0.0	0.0	2.5
1971	10.2	60.1	5.0	10.1	3.5	0.0	0.0	1.5
1972	0.1	21.4	0.0	11.1	1.0	0.5	0.0	2.0
1973	2.9	18.1	2.0	0.1	0.2	0.5	0.2	0.6
1974	0.0	8.7	1.2	1.0	1.2	0.5	0.4	0.8
1975	0.4	9.2	5.3	2.3	1.0	0.1	0.1	0.1
1976	0.9	8.5	0.6	4.6	4.0	0.0	0.6	0.8
1977	5.0	20.5	3.1	5.2	5.1	0.0	2.3	1.6
1978	4.1	19.0	1.5	1.4	16.1	0.0	0.5	0.5
1979	17.7	4.5	0.2	0.6	28.0	0.0	0.6	0.4
1980	10.2	18.5	1.0	0.5	11.6	0.0	0.5	0.3
1981	6.5	33.3	9.0	0.0	22.5	0.1	1.5	0.0
1982	0.0	6.3	0.0	3.5	5.5	0.0	0.0	0.0
1983	0.3	7.3	0.8	0.0	3.5	0.0	0.2	2.6
1984	1.0	14.6	4.6	5.5	5.2	0.0	0.3	1.4
1985	0.0	9.1	7.3	0.0			0.2	0.0
1986	0.7	5.0	0.0	0.1			0.5	0.1
1987	0.0	10.2	0.5	3.9			1.4	0.1
1988	4.0	6.1	0.0	0.8	5.1	0.0	0.9	1.0
1989	1.2	1.6	1.7	0.8	4.2	0.1	9.4	0.1
1990	0.9	8.9	0.0	2.2	13.5	0.0	1.3	1.5
1991	0.0	22.0	0.0	3.4	7.1	0.0	0.0	10.0
1992	2.5	5.3	1.5	2.0	28.8	0.0	1.2	0.8
1993	0.0	10.6	1.0	1.3	10.0	0.0	0.0	7.3
1994	17.3	6.0	5.0	3.0	9.4	0.0	1.6	3.5
1995	41.8	33.9	27.0	0.1	26.0	0.5	23.7	1.5
1996	7.1	30.0	6.4	1.0	22.5	0.0	3.0	3.0
1997	2.5	38.2	30.0	1.9	33.1	1.1	4.0	7.0
1998	0.0	17.6	0.0	4.0	13.7	1.2	0.5	2.6

-Continued-

Table 49. (page 8 of 8)

Year	Wasco's Cr. 275-404 Pink	Wasco's Cr. 275-404 Chum	Ivanof River 275-406 Pink	Ivanof River 275-406 Chum	Humpback Cr. 275-502 Pink	Humpback Cr. 275-502 Chum
1953						
1954						
1955						
1956						
1957						
1958						
1959						
1960						
1961						
1962	23.0	0.0	48.5	2.5	64.5	3.0
1963	1.0	0.0	128.0	4.0	26.4	0.4
1964	0.0	6.5	15.0	0.8	40.7	0.2
1965	2.0	0.0	61.4	5.5	13.8	0.0
1966	10.5	0.0	39.5	9.0	30.0	0.0
1967	2.0	0.0	98.5	3.0	36.7	0.0
1968	0.3	0.0	60.0	0.5	52.3	0.0
1969	4.0	0.0	122.4	0.5	75.0	0.0
1970	2.5	0.0	51.0	10.0	31.0	0.0
1971	3.0	4.0	25.0	21.0	13.4	1.5
1972	0.3	0.0	6.3	7.8	0.5	1.0
1973	0.0	0.0	24.7	8.2	6.1	0.6
1974	6.3	1.9	41.9	8.1	10.2	0.7
1975	0.9	0.0	33.4	15.0	9.2	3.5
1976	6.2	0.2	55.0	6.8	20.3	0.7
1977	1.6	0.5	51.8	9.0	48.2	1.2
1978	9.7	0.0	71.5	4.2	51.0	0.2
1979	2.0	0.1	89.0	7.1	59.0	5.0
1980	0.0	3.0	40.5	22.7	18.7	3.1
1981	0.0	0.2	39.9	17.0	46.5	2.0
1982	0.1	2.3	2.7	9.4	4.8	11.0
1983	2.0	0.0	34.3	5.6	17.8	0.0
1984	14.6	1.4	61.0	42.5	18.3	0.7
1985	0.3	0.0	181.6	10.6	36.8	0.3
1986	10.0	0.0	150.0	7.6	12.0	0.0
1987	11.9	0.1	24.7	6.9	15.5	0.8
1988	14.0	1.1	126.0	30.6	30.8	0.4
1989	3.8	0.3	161.0	4.0	51.0	0.5
1990	0.5	4.4	47.3	33.7	7.4	0.5
1991	0.0	0.1	118.3	332.9	28.8	0.0
1992	9.0	0.0	109.3	285.8	36.1	2.3
1993	0.0	1.0	230.2	22.7	96.9	4.8
1994	2.1	0.0	74.2	120.2	40.0	2.0
1995	14.0	3.4	234.2	128.0	195.7	0.7
1996	19.3	1.2	227.9	124.7	85.7	T
1997	8.3	0.1	77.4	128.2	62.7	6.0
1998	16.1	0.6	130.0	208.1	37.7	1.0

[a]Escapement from 1953-1984 are based on index estimates described by Shaul and Schwarz (1989) and from 1985-1998 estimates are based on area-under-the-curve methodology described by Johnson and Barrett (1988).

[b]September 15 was assumed to be last day of entry.

Table 50. Estimated subsistence harvests of salmon, Chignik Management Area, 1976 - 1998[a].

Year	Number of Permits Issued	Number of Permits Returned	Percentage Returned	Estimated Number Fished	Percentage Fished	Estimated Harvests Chinook	Sockeye	Coho	Pink	Chum	Total
1976						100	6,000	1,500	500	150	8,250
1977						50	9,700	2,400	1,800	600	14,550
1978						50	6,000	500	2,100	600	9,250
1979						14	7,750	34	262	0	8,060
1980	82	37	45.1%	70.0	85.4%	6	12,475	32	478	169	13,160
1981	29	7	24.1%	18.0	62.1%	0	2,049	0	0	0	2,049
1982	59	15	25.4%	56.0	94.9%	3	8,532	12	2	0	8,548
1983	32	21	65.6%	26.5	82.8%	0	3,078	1,319	1,250	850	6,497
1984	77	64	83.1%	57.7	74.9%	23	8,747	464	330	204	9,768
1985	59	48	81.4%	49.0	83.1%	1	7,177	50	26	25	7,279
1986	74	38	51.4%	70.0	94.6%	4	10,347	205	98	77	10,730
1987	NA	NA	NA	NA	NA	10	7,021	278	204	261	7,774
1988	80	34	42.5%	77.0	96.3%	9	9,073	1,455	54	142	10,733
1989	68	23	33.8%	46.8	68.8%	24	7,552	384	81	147	8,187
1990	72	23	31.9%	62.0	86.1%	103	8,099	210	470	115	8,996
1991	95	58	61.1%	83.0	87.4%	42	11,483	13	275	81	11,893
1992	98	19	19.4%	85.8	87.5%	55	8,648	709	305	145	9,862
1993	202	141	69.8%	163.6	81.0%	122	14,710	3,765	1,265	642	20,503
1994	219	122	55.7%	159.9	73.0%	165	13,978	4,055	1,720	382	20,300
1995	111	95	85.6%	95.2	85.8%	98	9,563	1,191	723	150	11,725
1996	119	104	87.4%	104.1	87.5%	48	7,357	2,126	2,204	355	12,090
1997	126	103	81.7%	118.7	94.2%	28	13,442	2,678	2,035	840	19,023
1998	104	72	69.2%	89.6	86.2%	91	7,750	1,390	1,007	186	10,424
Aver. 1980-98	94.8	56.9	60.0%	79.6	84.0%	45	8,719	1,077	747	266	10,854
Aver. 1993-98	146.8	106.2	72.3%	116.7	79.5%	92	11,133	2,534	1,492	426	15,678

[a] In 1993, the Division of Subsistence, ADF&G, obtained copies of all available subsistence permits for the Chignik Management Area from the Division of Commercial Fisheries archive in Kodiak. Permits issued prior to 1980 and for 1987 could not be located. All permit data were entered into a data base. The estimated harvests reported in this table differ slightly from that reported in earlier annual management reports for several reasons. There are small discrepancies in some years for the number of permits issued or returned. Estimated harvests in earlier annual management reports were based on a simple expansion from harvests reported on returned permits to the total number of permits issued. Harvest estimates in this table are based on the sum of expanded community harvest estimates, similar to the method used in the Bristol Bay and Alaska Peninsula Management Areas.

Since 1993, the Division of Subsistence has been responsible for permit data entry and harvest estimates for the Chignik Management Area. Increases in permits issued beginning in 1993, and consequently higher harvest estimates, reflect the use of local vendors to issue permits and post-season surveys by department staff and local research assistants.

Sources: Quimby and Owen 1994:90, for 1976 - 1979 and 1987; Division of Subsistence, ADF&G, Chignik Subsistence Salmon Permit Database, Anchorage, for the remaining years.

Table 51. Number of permits, landings, and salmon species harvested for personal use in the commercial salmon fishery in the Chignik Management Area, 1998.

Catch	Fishing Effort		Number Of Salmon				
MM/DD	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum
29-Jun	1	1	1	0	0	0	0
30-Jun	1	1	1	0	0	0	0
1-Jul	2	2	3	0	0	0	0
2-Jul	2	2	2	0	0	0	0
3-Jul	1	1	1	0	0	0	0
5-Jul	2	2	6	0	0	0	0
6-Jul	1	1	1	0	0	0	0
7-Jul	1	1	6	0	0	0	0
8-Jul	3	3	13	0	0	0	0
9-Jul	1	1	1	0	0	0	0
10-Jul	5	5	10	0	0	0	0
11-Jul	4	4	5	0	0	0	0
13-Jul	2	2	7	0	0	0	0
14-Jul	5	5	8	2	0	0	0
15-Jul	1	1	4	0	0	0	0
16-Jul	2	2	6	0	0	0	0
19-Jul	1	1	0	101	0	0	0
20-Jul	1	1	7	0	0	0	0
21-Jul	2	2	2	0	0	0	0
22-Jul	4	5	11	0	0	0	0
23-Jul	2	2	4	0	0	0	0
25-Jul	2	2	1	15	0	0	0
26-Jul	1	1	1	0	0	0	0
27-Jul	1	1	2	0	0	0	0
28-Jul	1	1	0	20	0	0	0
30-Jul	2	2	3	0	0	0	0
1-Aug	1	1	1	0	0	0	0
5-Aug	1	1	0	0	7	0	0
12-Aug	1	1	0	0	0	0	150
18-Aug	1	1	1	0	0	0	0
19-Aug	1	1	0	12	0	0	0
21-Aug	1	1	0	29	20	0	5
27-Aug	1	1	0	88	0	0	0
Total	23	59	108	267	27	0	155

Table 52. Dolly Varden daily and cumulative escapement through the Chignik weir by day, 1998.

Date	Escapement		Date	Escapement	
	Daily	Cumulative		Daily	Cumulative
May-24	6	6	Jul-16	244	9,847
May-25	6	12	Jul-17	243	10,090
May-26	6	18	Jul-18	250	10,340
May-27	6	24	Jul-19	416	10,756
May-28	6	30	Jul-20	376	11,132
May-29	0	30	Jul-21	160	11,292
May-30	6	36	Jul-22	185	11,477
May-31	24	60	Jul-23	188	11,665
Jun-1	12	72	Jul-24	180	11,845
Jun-2	18	90	Jul-25	137	11,982
Jun-3	12	102	Jul-26	89	12,071
Jun-4	22	124	Jul-27	97	12,168
Jun-5	42	166	Jul-28	182	12,350
Jun-6	26	192	Jul-29	200	12,550
Jun-7	18	210	Jul-30	139	12,689
Jun-8	24	234	Jul-31	104	12,793
Jun-9	18	252	Aug-1	49	12,842
Jun-10	30	282	Aug-2	39	12,881
Jun-11	6	288	Aug-3	61	12,942
Jun-12	12	300	Aug-4	36	12,978
Jun-13	18	318	Aug-5	96	13,074
Jun-14	36	354	Aug-6	30	13,104
Jun-15	6	360	Aug-7	30	13,134
Jun-16	24	384	Aug-8	96	13,230
Jun-17	84	468	Aug-9	103	13,333
Jun-18	61	529	Aug-10	54	13,387
Jun-19	156	685	Aug-11	18	13,405
Jun-20	297	982	Aug-12	55	13,460
Jun-21	624	1,606	Aug-13	32	13,492
Jun-22	480	2,086	Aug-14	43	13,535
Jun-23	258	2,344	Aug-15	56	13,591
Jun-24	216	2,560	Aug-16	66	13,657
Jun-25	127	2,687	Aug-17	36	13,693
Jun-26	236	2,923	Aug-18	13	13,706
Jun-27	333	3,256	Aug-19	42	13,748
Jun-28	151	3,407	Aug-20	60	13,808
Jun-29	175	3,582	Aug-21	102	13,910
Jun-30	195	3,777	Aug-22	97	14,007
Jul-1	66	3,843	Aug-23	189	14,196
Jul-2	240	4,083	Aug-24	108	14,304
Jul-3	198	4,281	Aug-25	138	14,442
Jul-4	176	4,457	Aug-26	66	14,508
Jul-5	93	4,550	Aug-27	61	14,569
Jul-6	427	4,977	Aug-28	14	14,583
Jul-7	244	5,221	Aug-29	51	14,634
Jul-8	513	5,734	Aug-30	66	14,700
Jul-9	322	6,056	Aug-31	108	14,808
Jul-10	285	6,341	Sep-1	174	14,982
Jul-11	712	7,053	Sep-2	90	15,072
Jul-12	679	7,732	Sep-3	127	15,199
Jul-13	956	8,688	Sep-4	36	15,235
Jul-14	705	9,393	Sep-5	Weir Removed	
Jul-15	210	9,603			

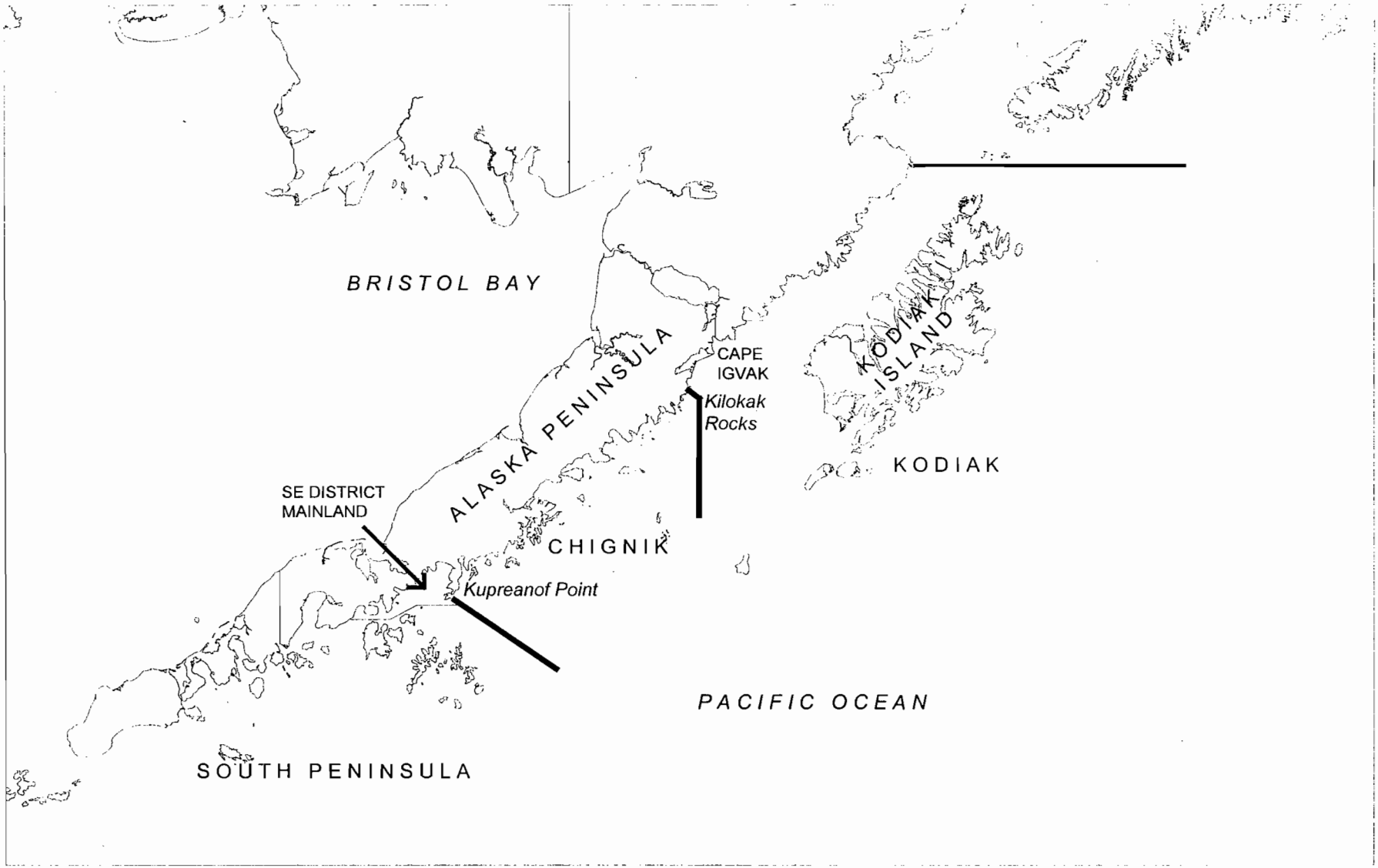

Figure 1. Map of the Alaska Peninsula illustrating the relative locations of the Chignik, Kodiak, and South Peninsula Management Areas.

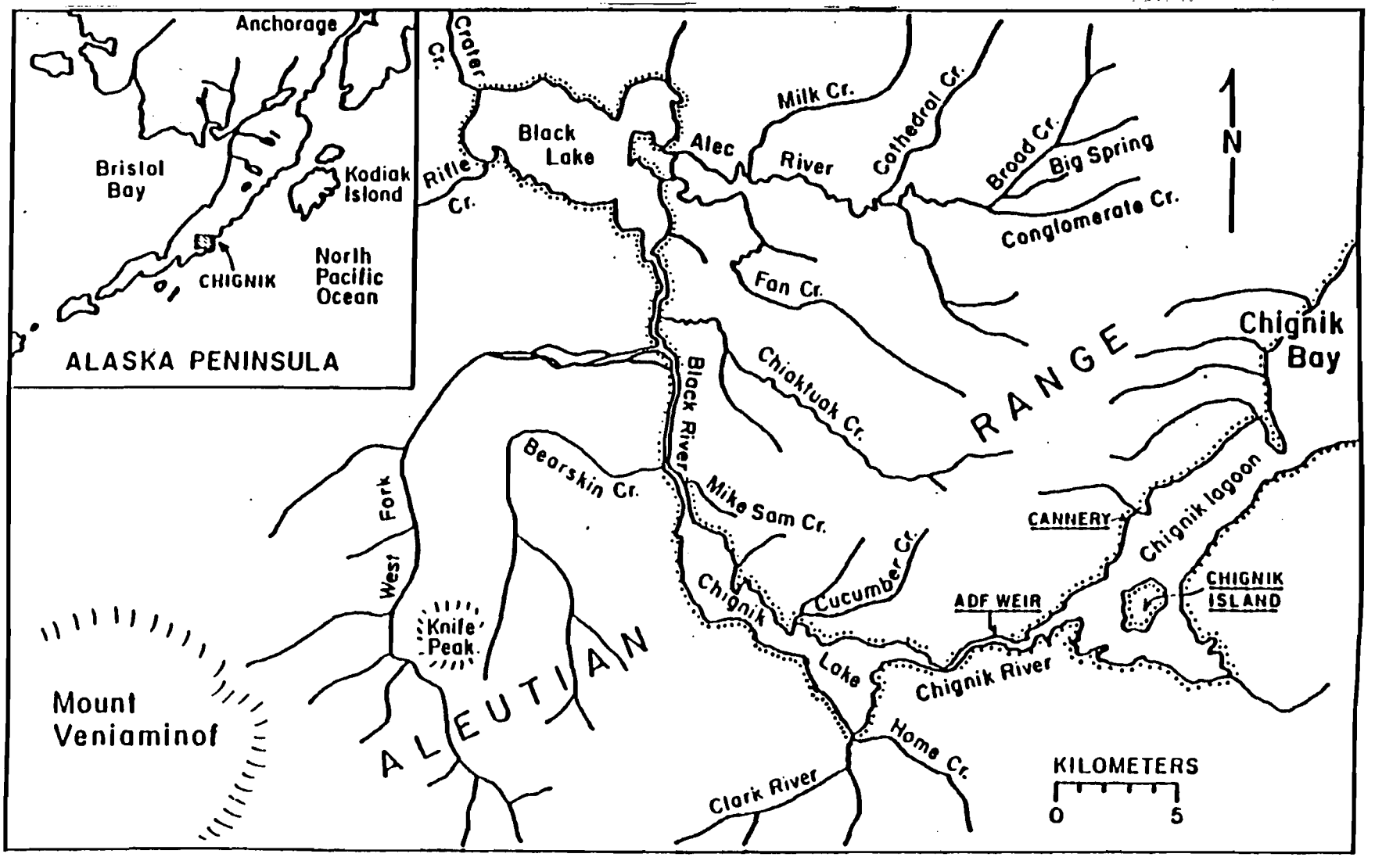

Figure 2. Map of the Chignik Lake watershed with inset of western Alaska.

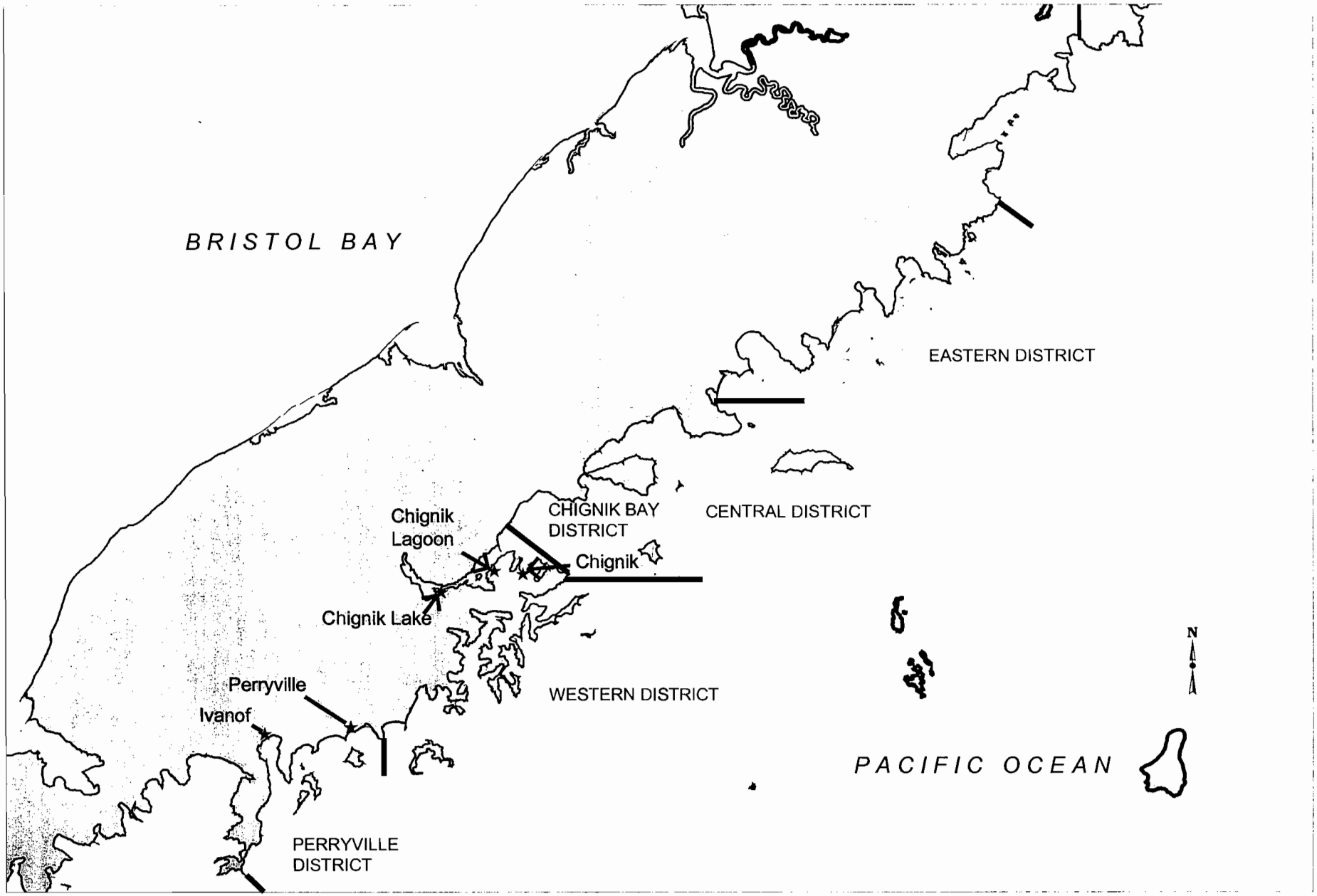

Figure 3. Map illustrating district boundaries and village locations within the Chignik Management Area.

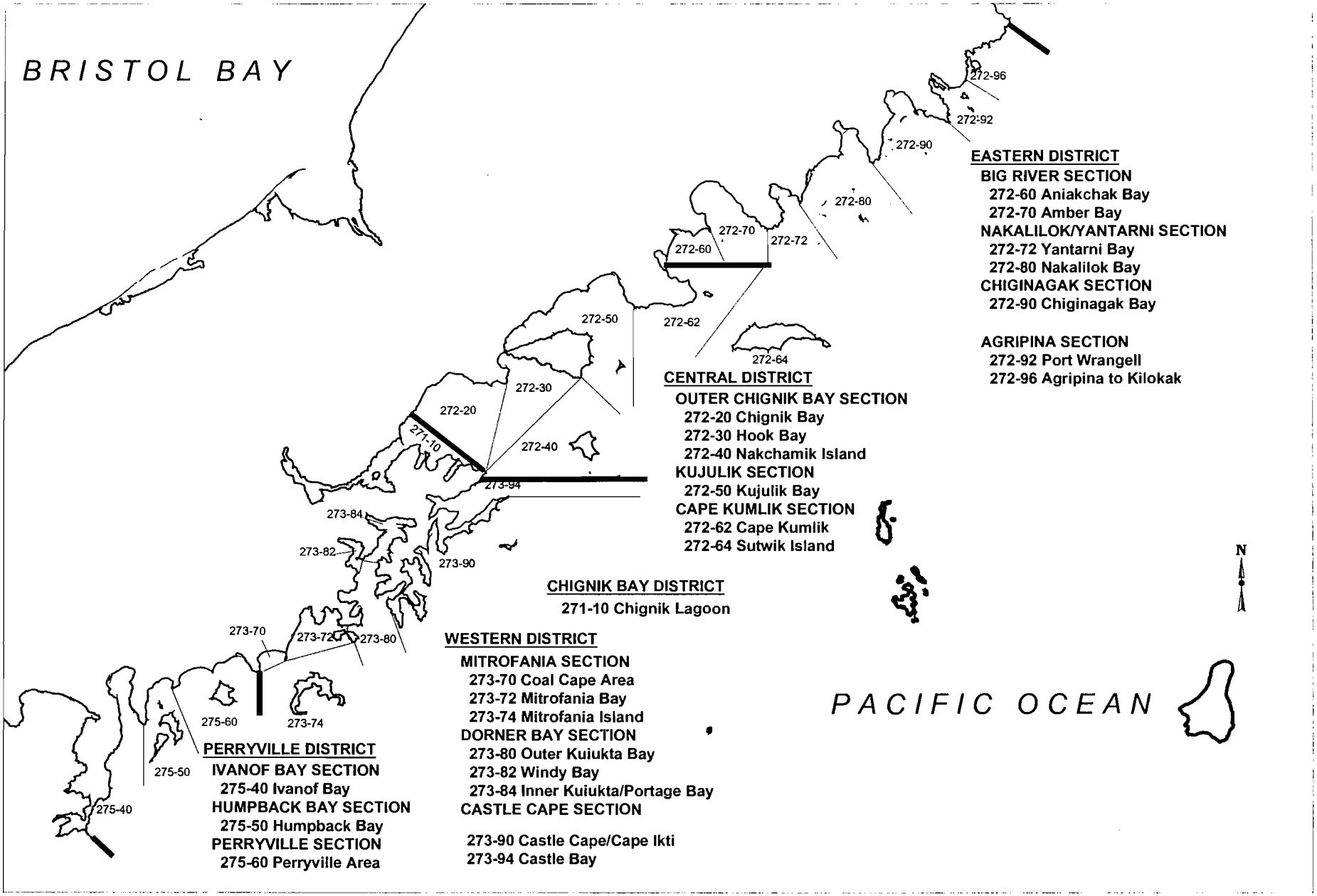

Figure 4. Map of Chignik Management Area illustrating district boundaries.

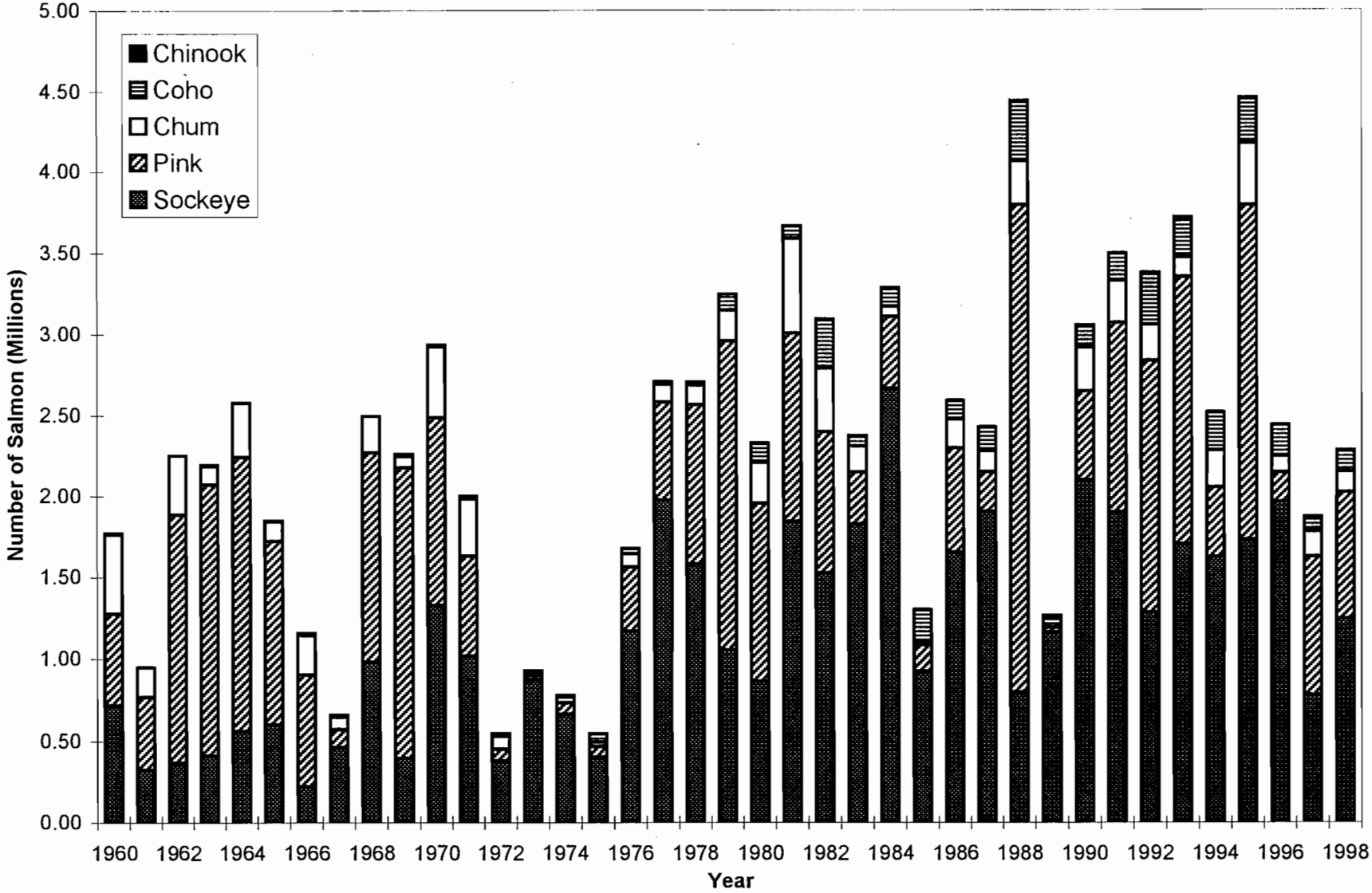

Figure 5. Total salmon harvests by species in the Chignik Management Area, 1960-1998.

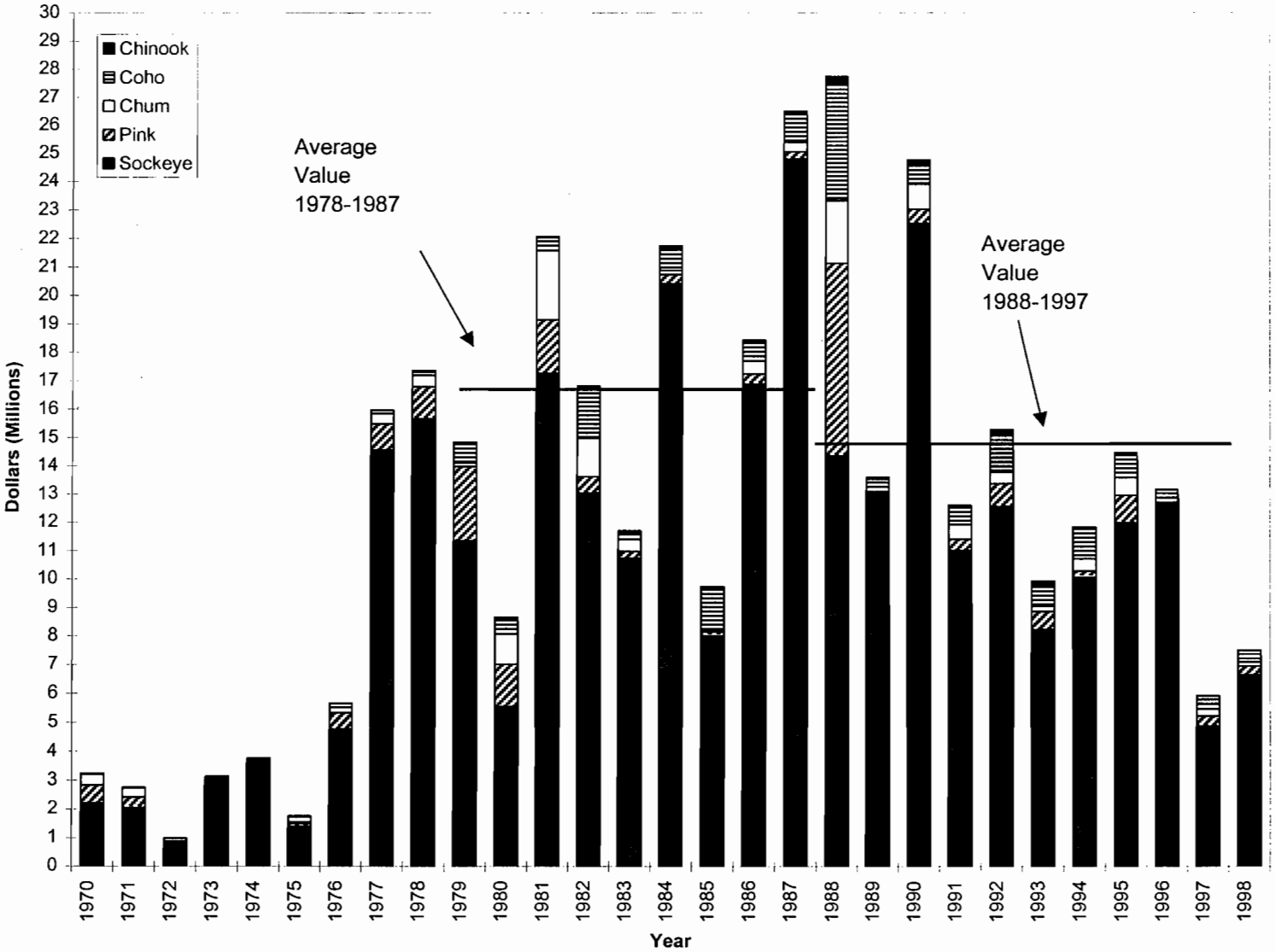

Figure 6. Exvessel value of the salmon harvested in the Chignik Management Area, 1970 - 1998.

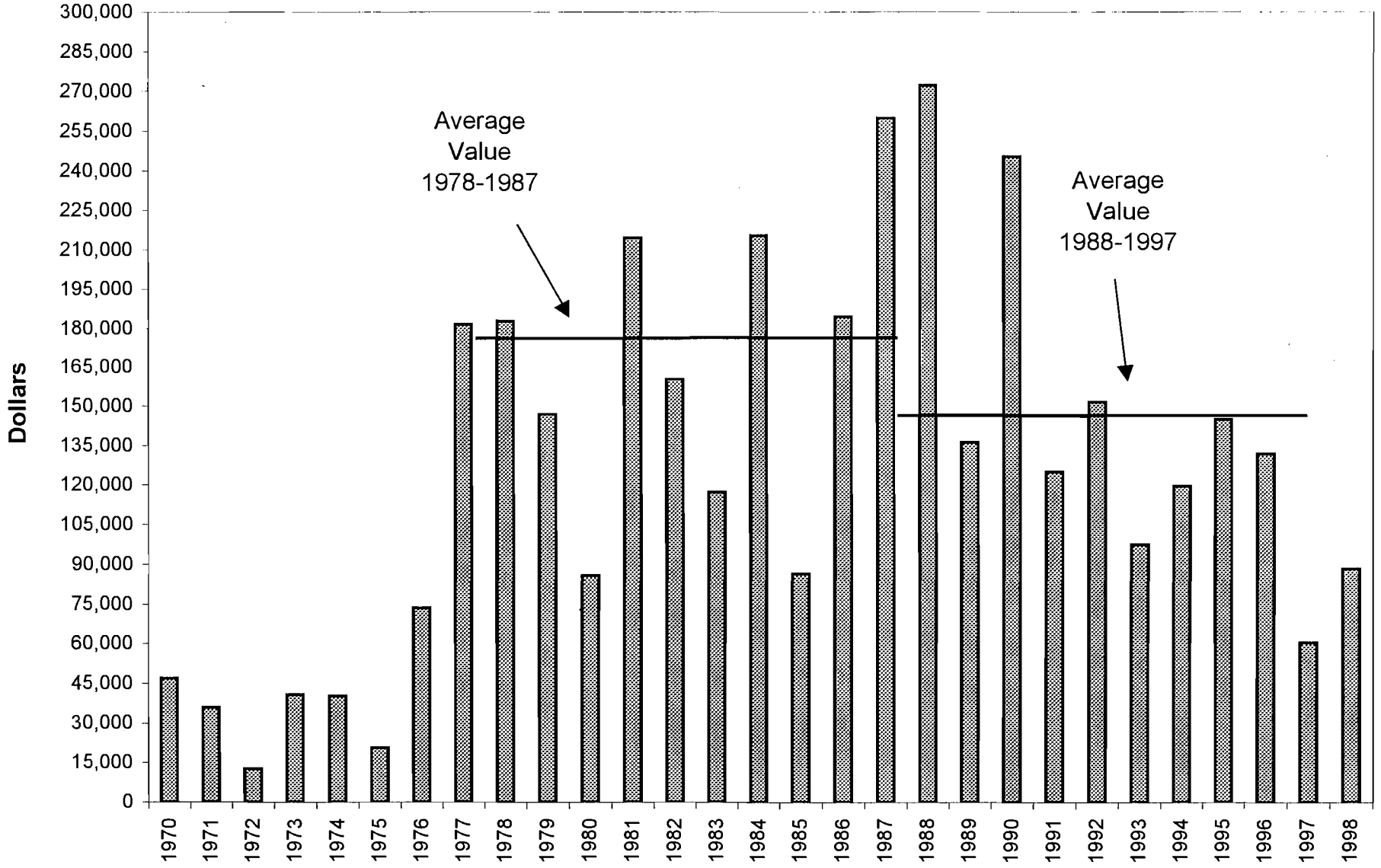

Figure 7. Average economic value of salmon per Chignik Management Area permit holder, 1970-1998.

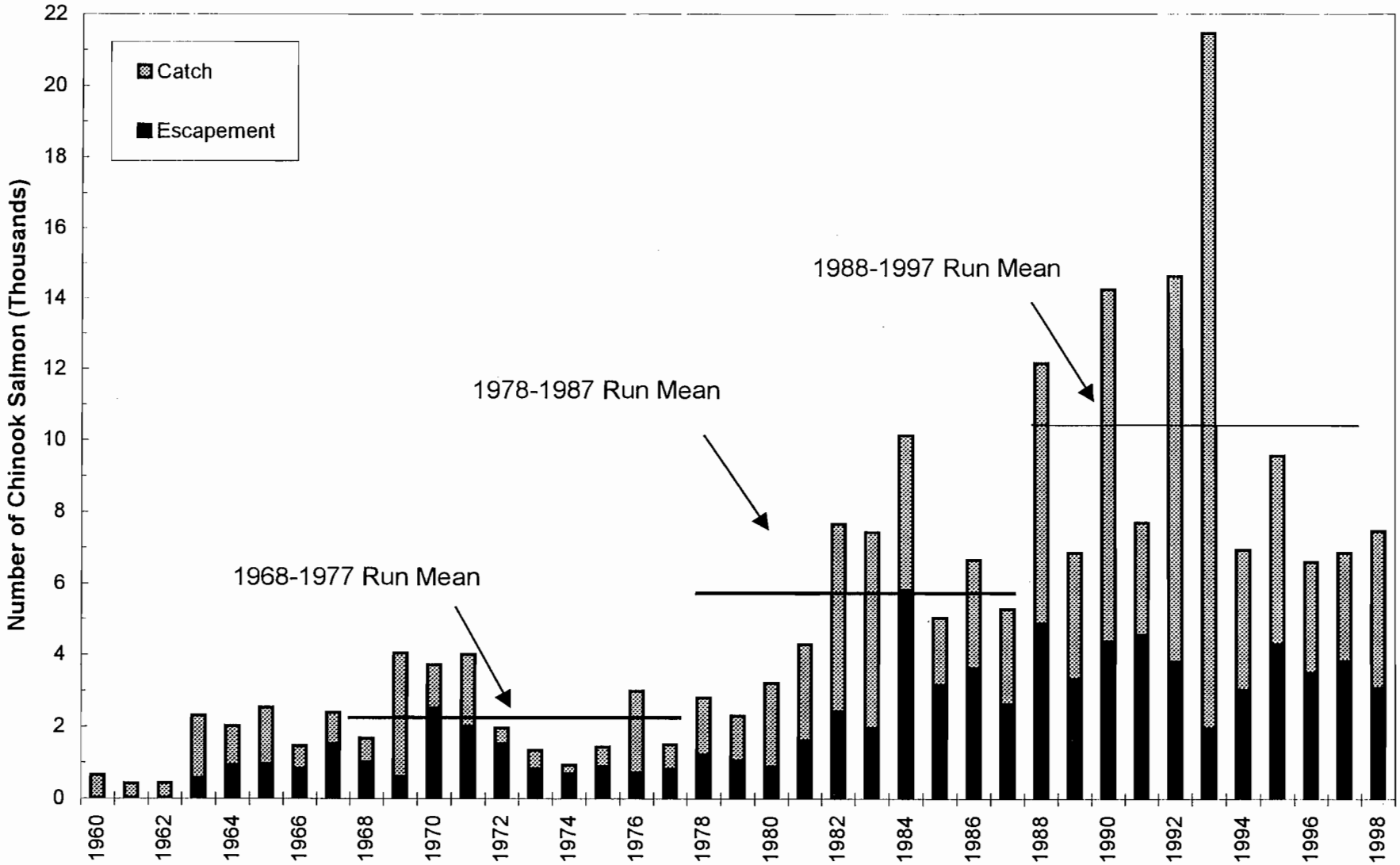

Figure 8. Chinook salmon catch and escapement in the Chignik Management Area, 1960-1998.

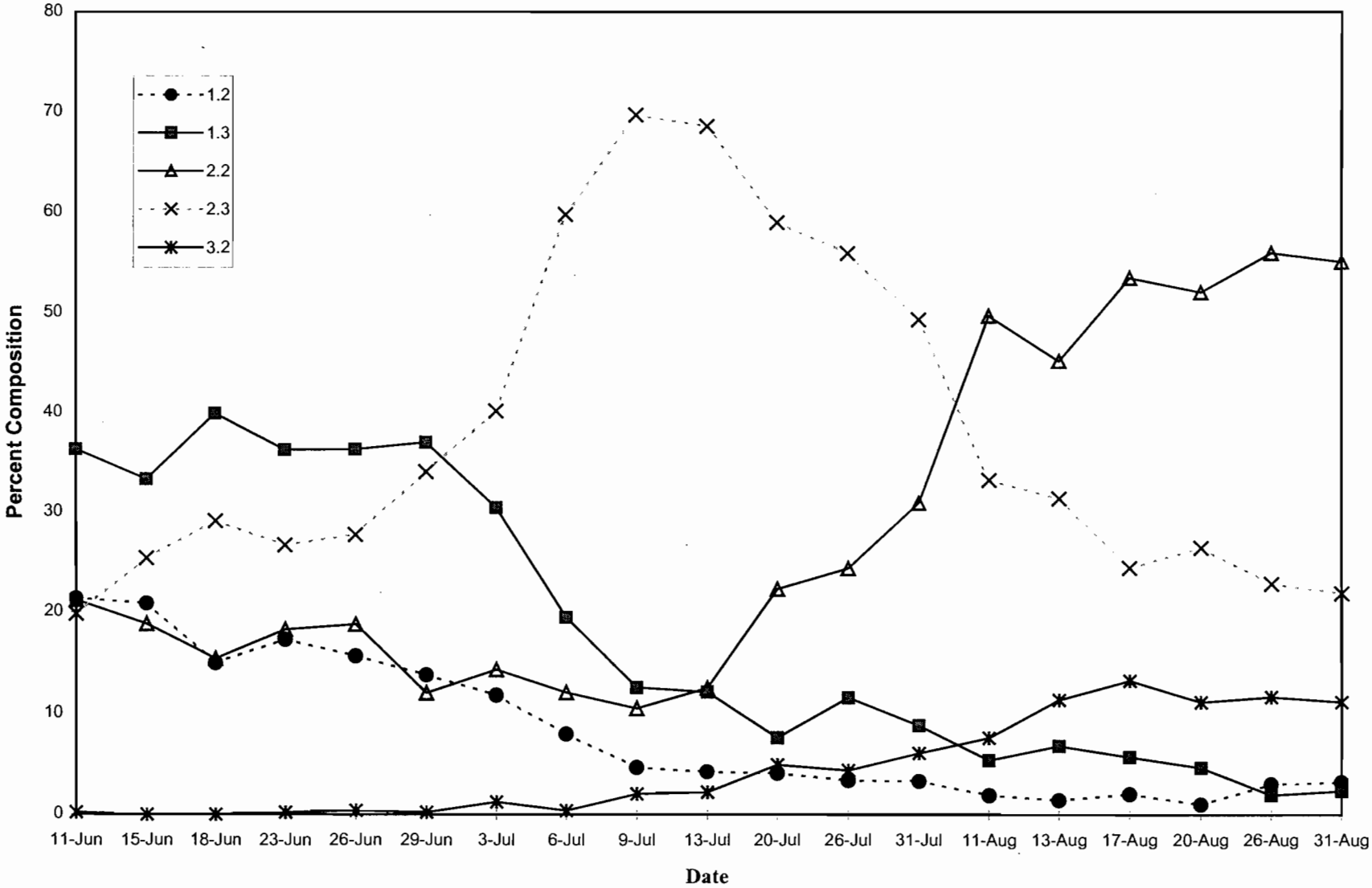

Figure 9. Age Composition of sockeye salmon sampled in the Chignik Lagoon fishery, 1998.

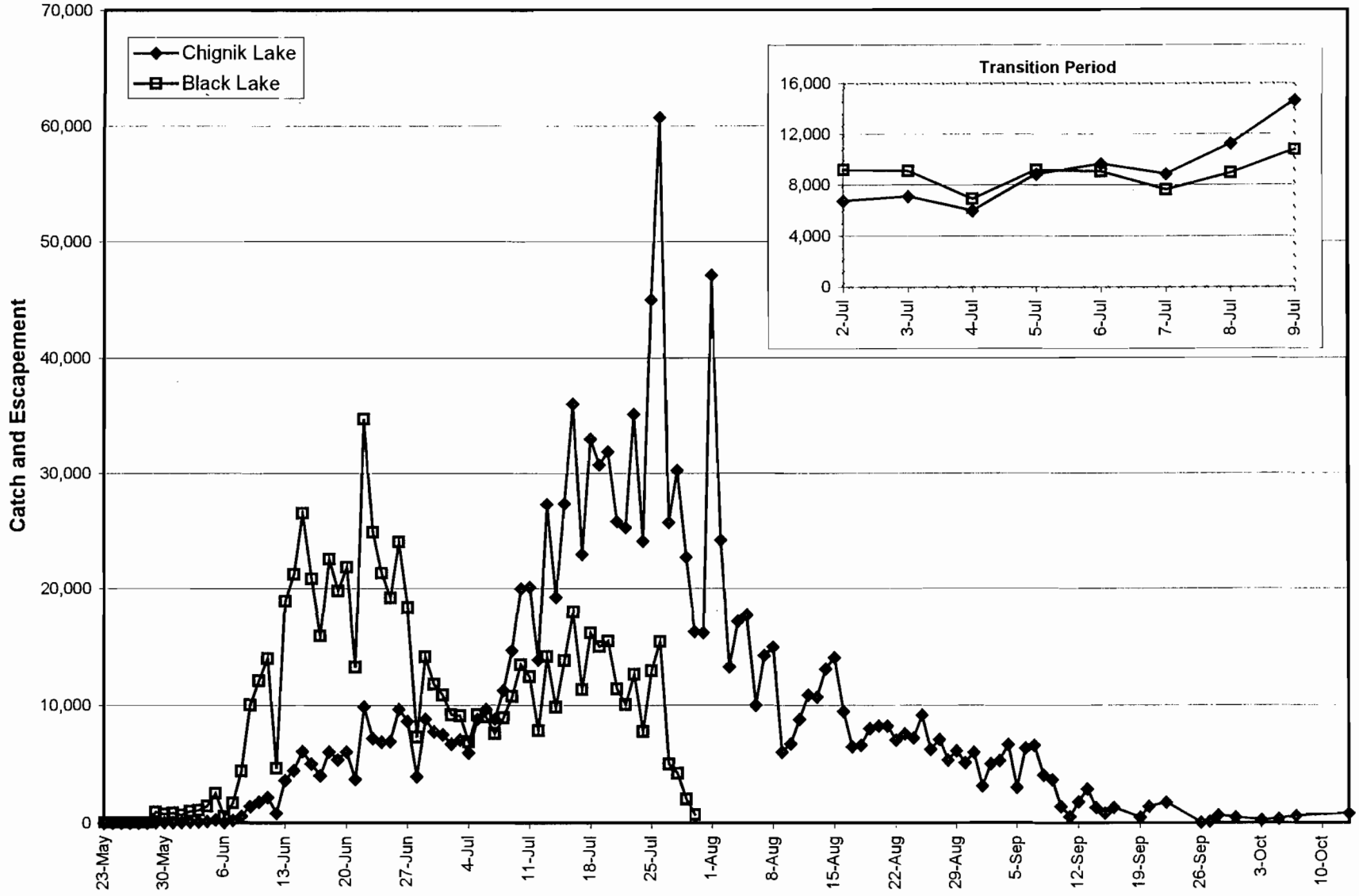

Figure 10. Daily sockeye salmon run by stock to the Chignik Lakes system, as estimated by scale pattern analysis, 1998.

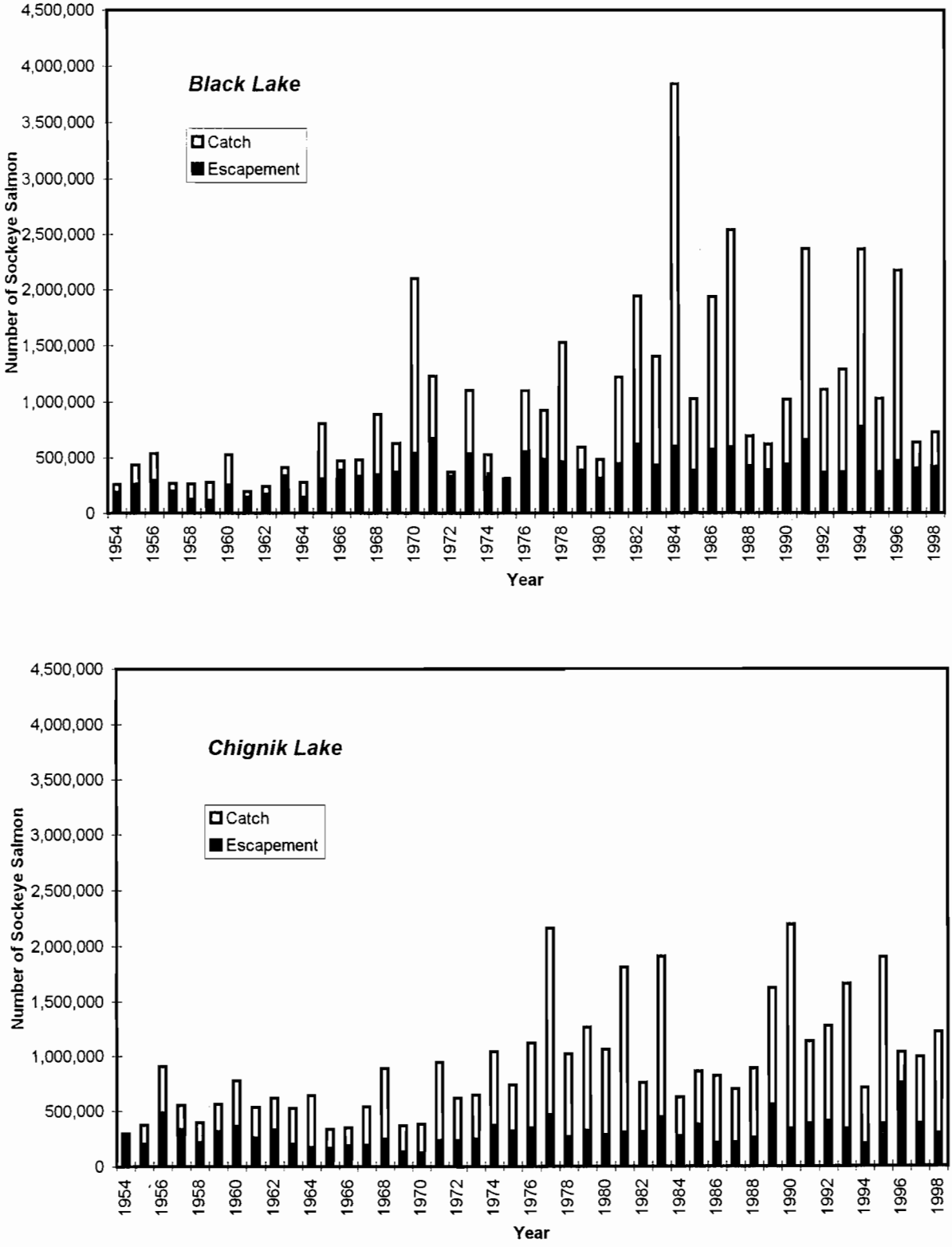

Figure 11. Black Lake (upper panel) and Chignik Lake (lower panel) sockeye salmon catch and escapement, 1954-1998.

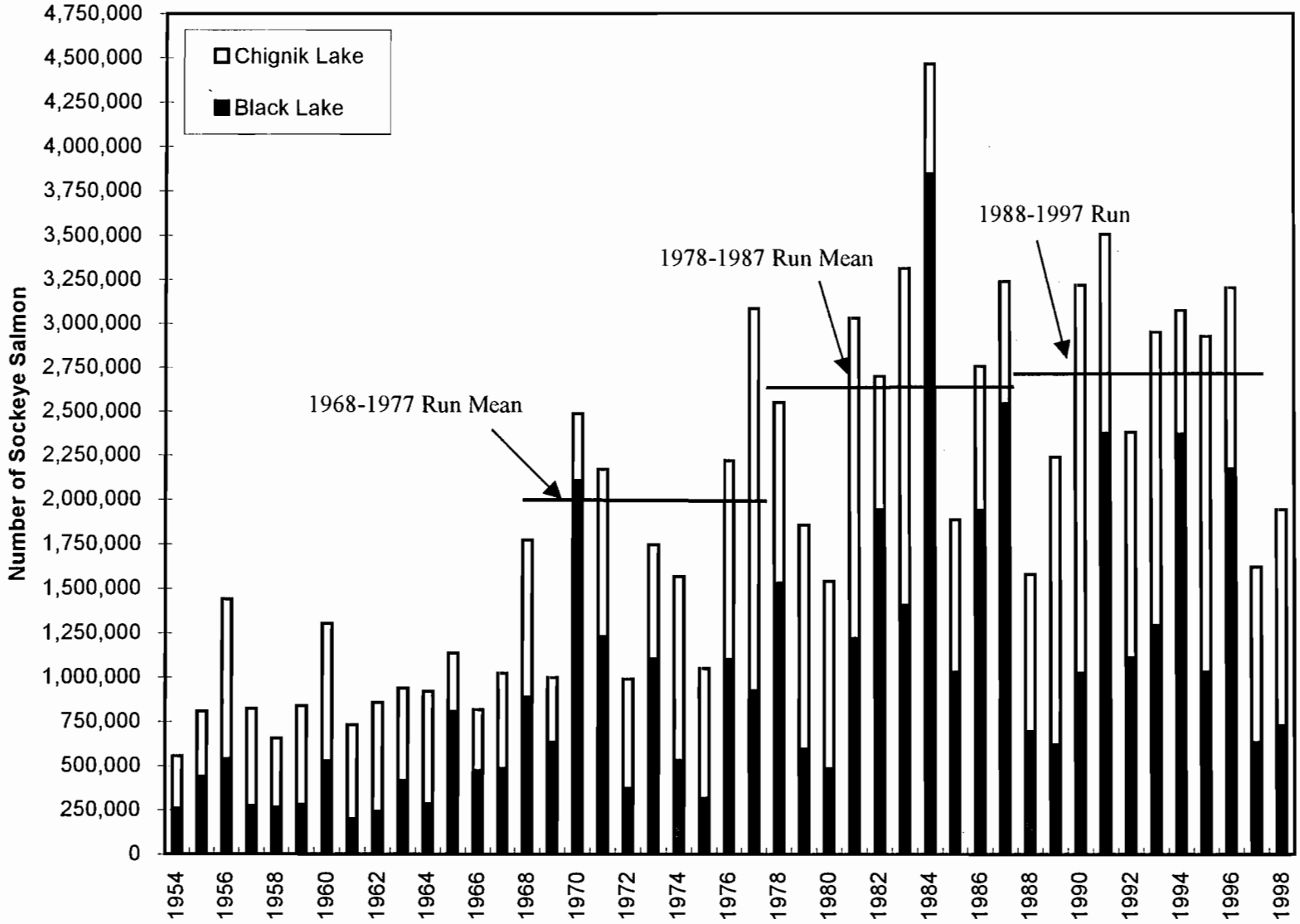

Figure 12. Total sockeye salmon runs to Black and Chignik Lakes, 1954-1998.

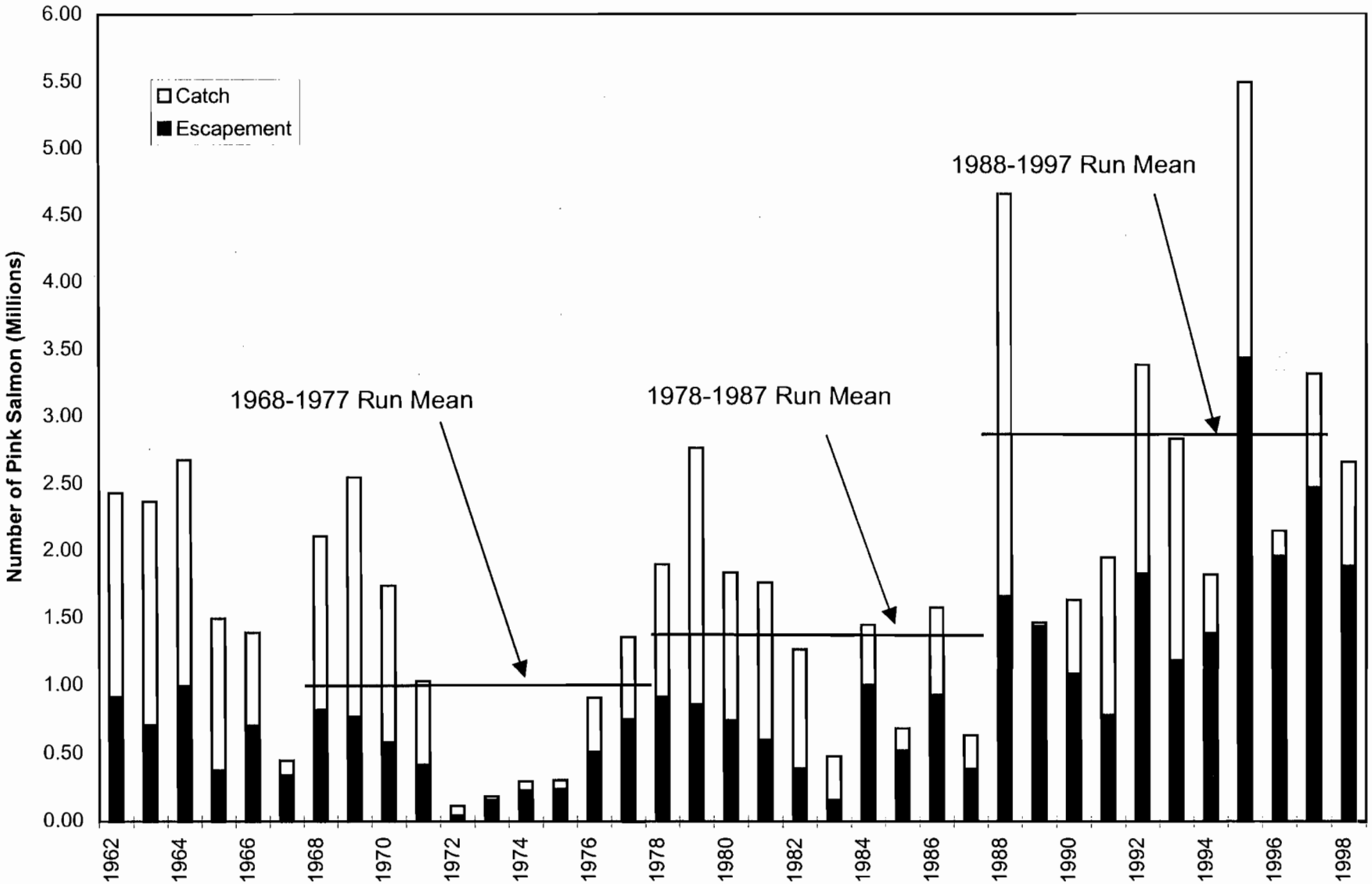

Figure 13. Pink salmon catch and escapement in the Chignik Management Area, 1962-1998.

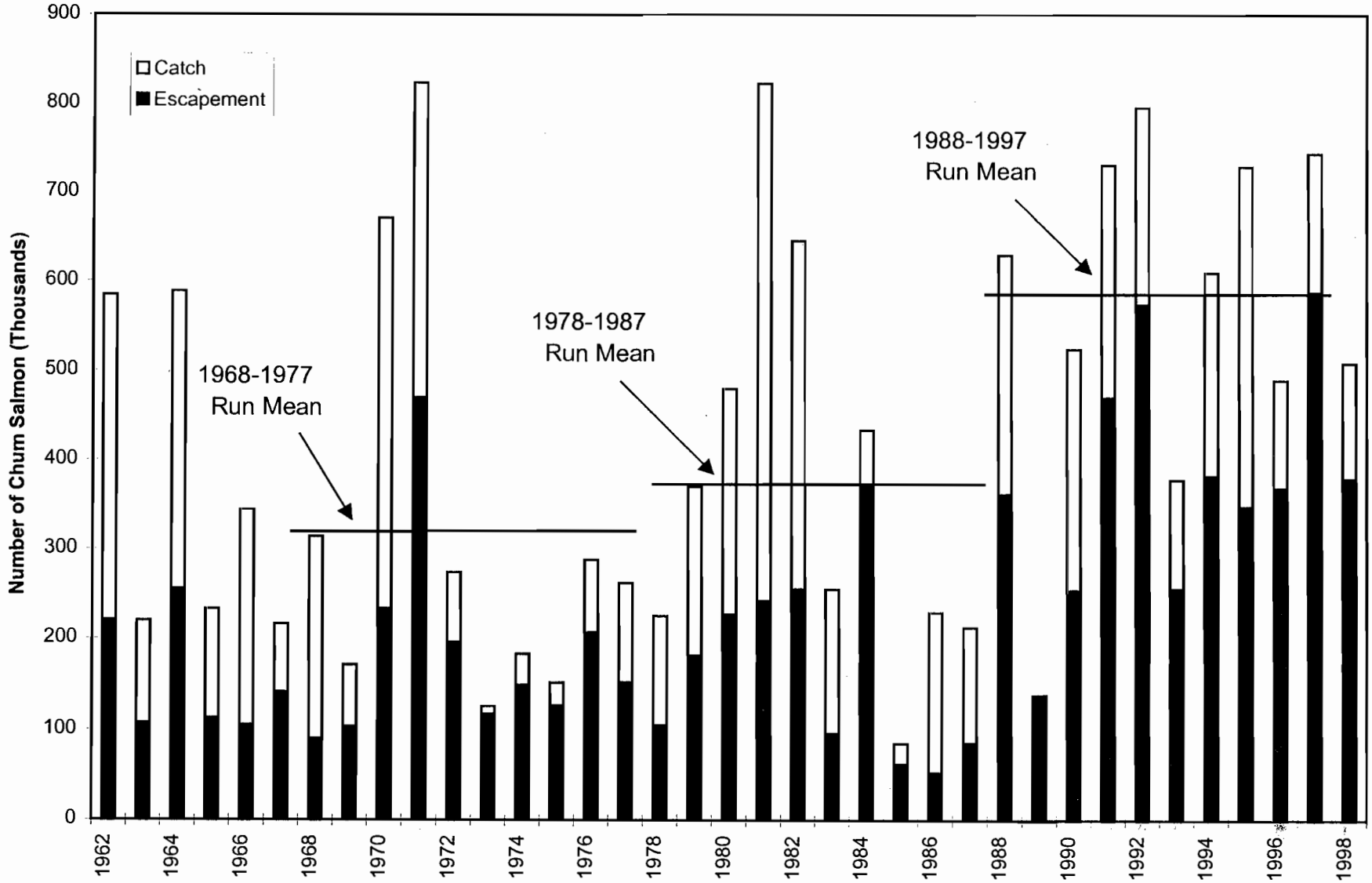

Figure 14. Chum salmon catch and escapement in the Chignik Management Area, 1962 - 1998.

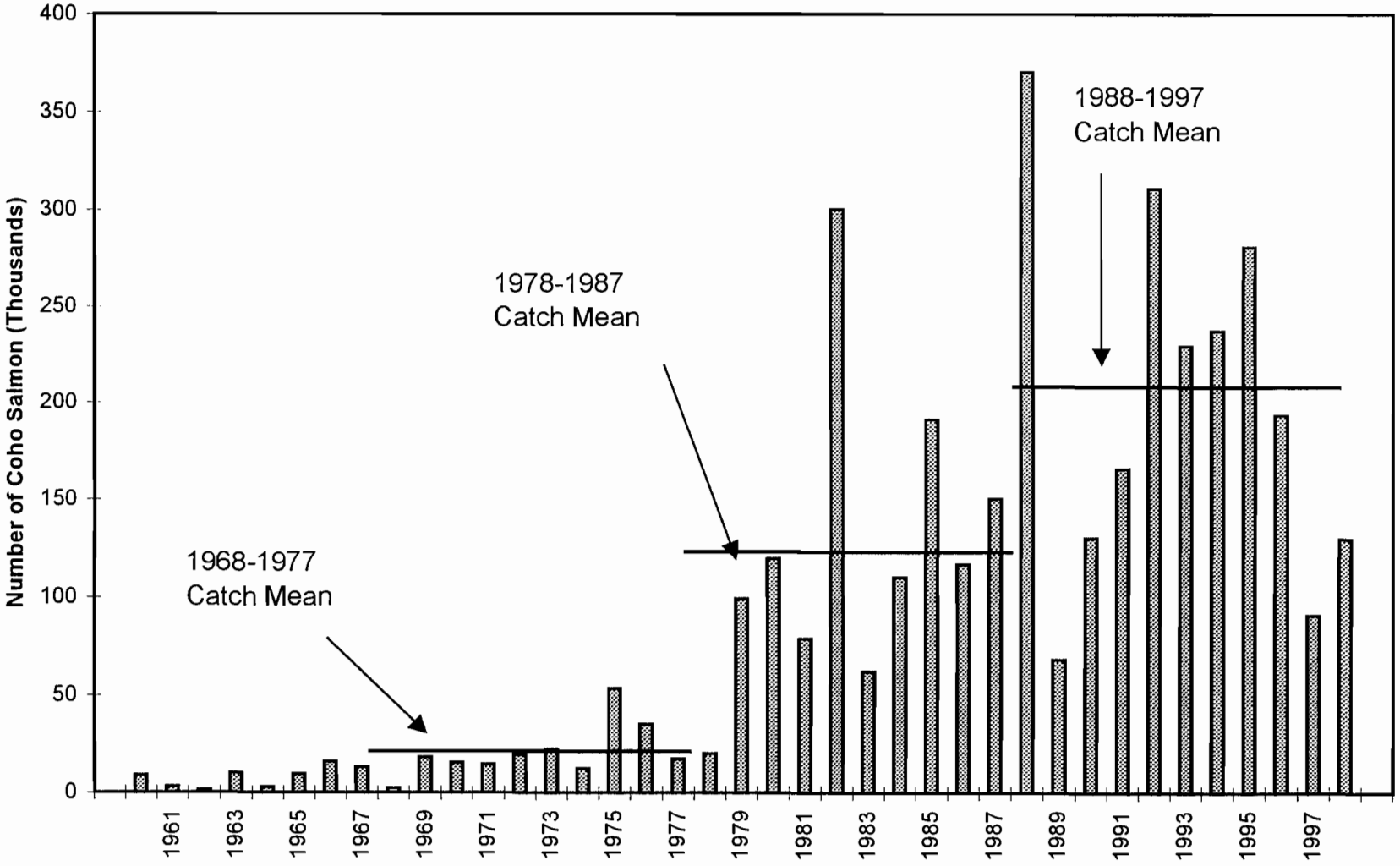

Figure 15. Coho salmon catches in the Chignik Management Area, 1960-1998.

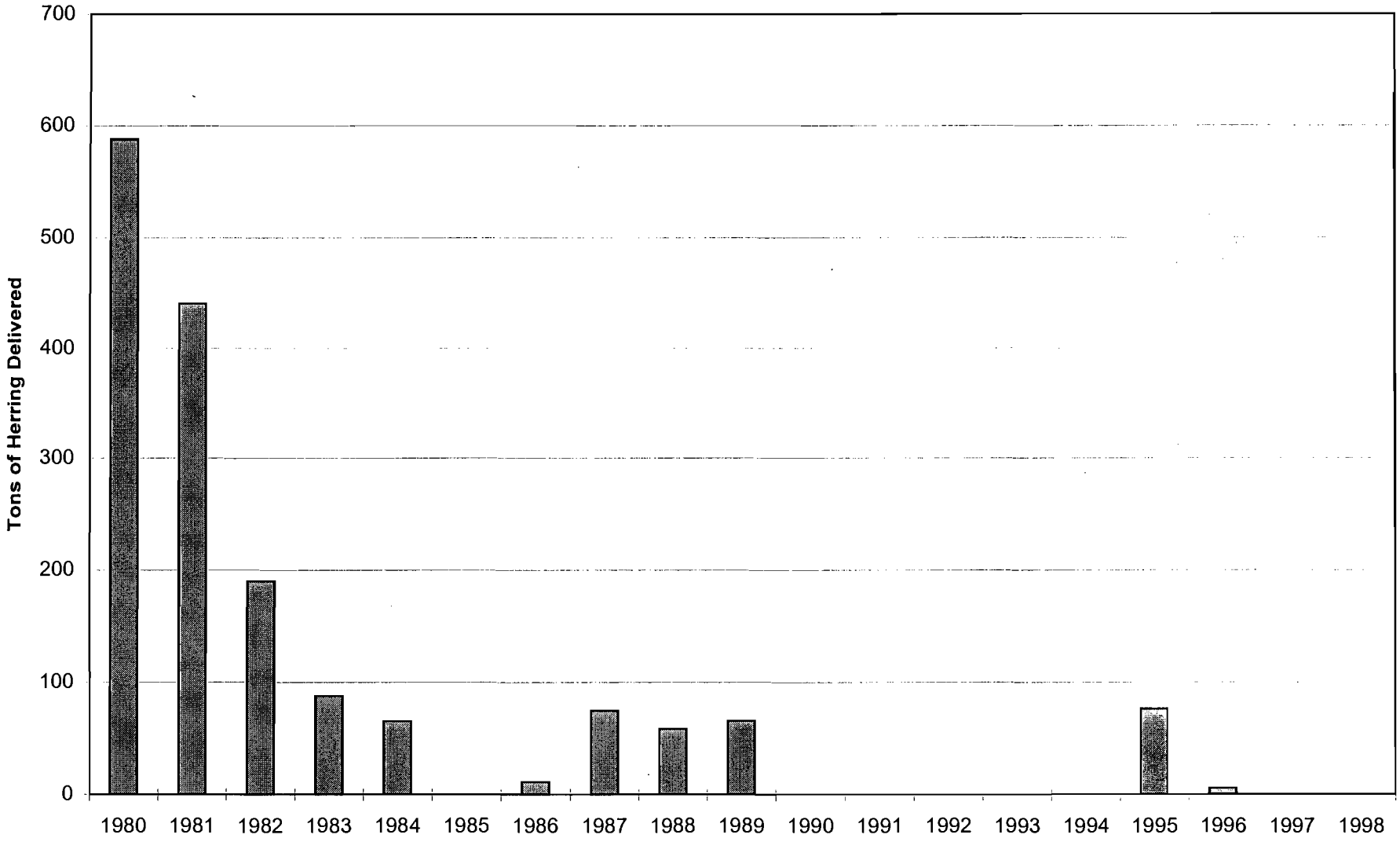

Figure 16. Pacific herring harvests in the Chignik Management Area, 1980-1998.

APPENDIX

Appendix A.1. Chignik Management Area salmon forecasts, 1998.

FORECAST AREA: **Chignik Management Area**

SPECIES: **Sockeye salmon**

PRELIMINARY FORECAST OF THE 1998 RUN:

	Forecast Estimate (thousands)	Forecast Range (thousands)
TOTAL PRODUCTION:		
Early Run (Black Lake)		
Total Run	900	250–1,650
Escapement	400	
Commercial Common Property Harvest	500	
Late Run (Chignik Lake)		
Total Run	1,100	550-2,650
Escapement	250	
Commercial Common Property Harvest	850	
Total Chignik Run		
Total Run	2,000	800–4,300
Escapement	650	
Commercial Common Property Harvest	1,350	

FORECAST METHODS

Black Lake

The preseason run forecast to Black Lake was generated with a multiple linear regression model employing numbers and length of the prior year's age 1.2 sockeye (1966-1997) and current year numbers of age 1.3 and 2.3 fish combined (r^2=0.73). Cross validation was completed using freshwater age specific smolt to adult survival estimates from 1997 returns applied to 1994 smolt population estimates. The estimates closely mirrored one another, however only one year of smolt survival data was available. All other age class estimates are based on recent 10-year average returns.

-Continued-

Chignik Lake

The Chignik Lake forecast is based primarily on 1995 age 2. smolt outmigration numbers coupled with smolt to adult survival based on returns from 1997. Two methods were used and contrasted for estimation of the run; method 1 used the product of age 2. smolt numbers from 1995 divided by 1994 numbers, then multiplied by 1997 adult run numbers; the second used the estimate of age 1.3 Black Lake run for 1998 multiplied by the ratio of age 1. to age 2. smolt to adult survival. This assumes most age 1. sockeye are of Black Lake origin while age 2. fish are from Chignik Lake. Accuracy of the 1998 projection is unknown owing to only a single smolt to adult survival data point.

DISCUSSION OF THE 1998 FORECAST

Early Run: The 1998 Black Lake sockeye salmon run is expected to be 0.9 million fish which is approximately 0.4 million fish less than the 1997-97 average run of 1.3 million. Contributing factors for this low projection is the return of 48 thousand age 1.2 sockeye salmon during the 1997 season, the lowest return since 1989 (37 thousand) which anticipated the 1990 run of about 1.0 million. Recently, the 1996 return of 52 thousand age 1.2 sockeye salmon anticipated the return of approximately 0.7 million fish in 1997. Only 12 times from 1966 to the present, and twice since 1989 has the return of age 1.2 sockeye salmon been between 30 thousand and 100 thousand. Only one of the returns within this range has resulted in an above average run. Additionally, the 1995 age 1. smolt outmigration (2.6 million) was weaker than that of the 1994 (7.0 million) which resulted in a poor return of age 1.3 fish in 1997. Confidence in this forecast is fair. We remain uncertain as to forecast accuracy owing to the overall poor performance of the 1997 preseason forecasts region wide.

Late Run: Both methods estimated the 1998 Chignik Lake sockeye salmon run to be 1.1 million fish which is approximately 0.2 million fish less than the 1988-97 average run of 1.3 million sockeye salmon. For the 6 year old (age 2.3) which typically dominate the run, the parent year (1992) escapement is 405,922 with a resultant return per spawner value of 4.4. In recent years, when one of the runs dominates it appears to suppress the other. However, neither run is expected to overwhelm the other but return at below average levels. The methods employed for this forecast remain untested, therefore a fair amount of uncertainly exists.

Prepared By:

David Owen
Area Management Biologist
Chignik Area ADF&G

Charles O. Swanton
Regional Research Biologist

-Continued-

Chignik Management Area
1998 Harvest Projections

Chinook[1]	Sockeye[2]	Coho[3]	Pink[4]	Chum[5]	Total
7,000	1,067,000	235,000	1,100,000	270,000	2,679,000

[1] Chinook harvest is dependent upon the amount of fishing time allowed for sockeye salmon in July; the harvest projection approximates a 10-year average, 1988-1997.

[2] Estimate does not include the Cape Igvak and Southeast Mainland District intercept fisheries (21% allocation) which equates to approximately 0.3 million Chignik bound sockeye salmon through July 25.

[3] Fishing time for coho harvests will be related to the strength of the Chignik Lake sockeye run. Chignik Bay and outside catches are based on a 10-year harvest average.

[4] The 1998 pink forecast is based on the harvestable surplus over the most recent 10-year period. Slightly more harvest should come from the Western and Perryville Districts than the Central and Eastern Districts.

[5] The chum salmon forecast is based on the average returns from escapements 1984-1993. The Western and Perryville Districts should experience the largest proportion of the catch.

Appendix A.2. Comparison of Black Lake (early run) and Chignik Lake (late run) forecasts versus actual runs in millions of sockeye salmon, 1987-1998.

	Black Lake			Chignik Lake			Combined Total Run		
Year	Forecast	Actual	Percent Difference	Forecast	Actual	Percent Difference	Forecast	Actual	Percent Difference
1987	1.8	2.5	-38.9%	1.3	0.7	46.2%	3.1	3.2	-3.2%
1988	1.4	0.7	50.0%	0.8	0.9	-12.5%	2.2	1.6	27.3%
1989	1.2	0.6	50.0%	1.0	1.6	-60.0%	2.2	2.2	0.0%
1990	0.8	1.0	-25.0%	1.0	2.2	-120.0%	1.8	3.2	-77.8%
1991	2.8	2.4	14.3%	1.1	1.1	0.0%	3.9	3.5	10.3%
1992	1.8	1.1	38.9%	0.9	1.3	-44.4%	2.7	2.4	11.1%
1993	1.6	1.3	18.8%	1.0	1.7	-70.0%	2.6	3.0	-15.4%
1994	1.8	2.4	-33.3%	1.3	0.7	46.2%	3.1	3.1	0.0%
1995	1.9	1.0	47.4%	1.9	0.9	52.6%	2.8	2.9	-3.6%
1996	1.4	2.2	-57.1%	1.6	1.2	25.0%	3.0	3.4	-13.3%
1997	1.0	0.6	40.0%	1.6	1.0	37.5%	2.6	1.6	38.5%
1998	0.9	0.7	22.2%	1.1	1.2	-9.1%	2.0	1.9	5.0%

Appendix B.1. Total sockeye return to Black Lake by brood year and age, 1915 - 1998.

		Age Composition[a]														
Year	Parent Escapement	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	Total	Return/ Spawner
1915												1,202	1,202		2,404	
1916									9,315	68,559	37	15	0		77,926	
1917							318,491	20,666	576	18,747	0	0	0	0	358,480	
1918				0	12,960	0	43,803	6,984	0	49,097	0	0	138	0	112,982	
1919		0	0	0	15,073	0	92,073	28,499	16	74,062	30	0	324	0	210,077	
1920		0	0	0	63,251	0	422,288	28,279	0	111,422	6,511	0	273	0	632,024	
1921		0	0	0	122,550	0	258,628	113,493	5,873	255,927	0	0	0	0	756,471	
1922	86,421	0	0	0	40,685	0	659,040	56,121	0	202,612	2,465	1,222	1,669	0	963,814	11.15
1923	4,642	0	0	0	18,213	0	172,343	53,445	2,677	132,776	410	436	59	0	380,359	81.94
1924	121,983	0	0	0	85,083	0	1,206,555	8,855	426	19,931	939	384	384	0	1,322,557	10.84
1925	386,364	0	0	0	1,529	0	54,164	9,924	384	50,707	937	17	0	0	117,662	0.30
1926	289,009	0	0	0	7,544	420	104,094	45,572	11,714	352,025	7,117	0	1,708	0	530,194	1.83
1927	857,881	0	0	0	99,929	66	2,375,878	85,253	721	107,239	165	3,699	4,234	0	2,677,184	3.12
1928	507,353	0	0	0	23,860	0	304,338	49,284	9,848	428,369	2,755	409	2,118	0	820,981	1.62
1929	995,832	0	0	0	9,910	0	918,487	58,777	5,626	60,214	865	144	144	0	1,054,167	1.06
1930	92,955	0	0	0	23,769	0	286,339	13,886	6,663	43,297	3,527	4	0	0	377,485	4.06
1931	96,201	0	0	0	33,685	943	923,763	46,710	28	122,389	0	655	58	0	1,128,231	11.73
1932	2,151,734	0	0	0	50,602	0	191,354	36,823	10,350	43,060	291	8,584	234	0	341,298	0.16
1933	223,913	0	0	0	62,079	0	247,818	7,609	138,675	164,540	0	625	54	0	621,400	2.78
1934	866,890	0	0	0	16,228	4	1,583,632	6,057	9,886	40,971	276	1,299	113	0	1,658,466	1.91
1935	194,636	0	10	0	68,710	0	235,971	7,188	20,562	85,058	572	1,508	130	0	419,709	2.16
1936	548,039	0	0	0	15,422	3	490,061	14,873	23,865	98,553	661	2,346	201	0	645,985	1.18
1937	205,613	0	9	0	32,001	7	567,984	17,179	37,146	153,156	1,026	960	82	0	809,550	3.94
1938	175,972	0	19	0	37,059	7	882,938	26,618	15,193	62,552	418	706	60	0	1,025,570	5.83
1939	1,142,852	0	22	0	57,563	12	360,712	10,840	11,171	45,926	307	2,470	209	0	489,232	0.43
1940	176,307	0	35	0	23,499	5	264,904	7,938	39,130	160,651	1,070	7,513	634	0	505,379	2.87
1941	374,420	0	14	0	17,246	3	926,890	27,697	119,048	488,137	3,247	1,196	101	0	1,583,579	4.23
1942	442,981	0	11	0	60,302	12	2,817,023	83,954	18,948	77,598	515	684	58	0	3,059,105	6.91
1943	701,859	0	36	0	183,156	37	447,919	13,315	10,839	44,522	297	499	38	0	700,658	1.00
1944	291,844	0	111	0	29,106	6	256,848	7,683	7,947	31,664	203	482	43	0	334,093	1.14
1945	217,882	0	18	0	16,715	3	183,734	5,143	7,619	31,784	216	275	27	0	245,534	1.13
1946	774,130	0	10	0	11,775	2	182,835	5,644	4,307	18,686	133	707	64	0	224,163	0.29
1947	2,386,733	0	7	0	11,988	2	106,718	3,550	11,150	46,809	320	525	43	0	181,112	0.08
1948	384,637	0	7	0	7,129	1	268,953	8,407	8,346	33,877	223	352	0	0	327,295	0.85
1949	213,269	0	4	0	17,688	4	195,878	5,713	0	89,095	0	0	152	0	308,534	1.45
1950	206,270	0	11	0	12,671	3	287,407	12,644	1,862	76,722	648	373	286	0	392,627	1.90
1951	125,126	0	8	0	46,798	0	448,360	3,404	2,319	124,345	0	455	0	0	625,689	5.00
1952	34,155	0	0	0	4,390	0	137,957	3,423	208	81,691	0	639	2,512	0	230,820	6.76
1953	168,375	0	0	0	1,024	32	154,589	17,848	1,625	180,887	252	0	1,350	0	357,607	2.12
1954	184,953	0	143	0	6,468	0	50,272	10,720	515	72,973	9	312	1,009	0	142,421	0.77

-Continued-

Year	Parent Escapement	Age Composition[a] 0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	Total	Return/ Spawner
1955	256,757	0	783	0	30,302	0	430,793	3,476	339	88,693	109	0	0	0	554,495	2.16
1956	289,096	0	17	0	16,499	0	81,569	14,910	9	90,001	0	196	4,967	0	208,168	0.72
1957	192,479	0	0	0	6,559	161	117,979	10,507	52	210,686	3,641	21	906	0	350,512	1.82
1958	120,862	0	905	0	19,146	0	79,955	81,992	0	60,132	77	61	103	0	242,370	2.01
1959	112,226	0	1,522	0	31,039	142	148,403	13,872	402	144,581	874	58	54	0	340,947	3.04
1960	251,567	0	124	0	55,546	221	610,592	32,598	6,221	65,418	49	606	3,383	0	774,756	3.08
1961	140,714	0	276	0	14,301	1	387,053	3,483	536	164,278	486	1,020	209	0	571,645	4.06
1962	167,602	0	698	0	8,379	0	257,371	25,726	3,194	395,626	1,524	954	0	0	693,473	4.14
1963	332,536	0	0	0	29,538	173	448,298	17,628	905	199,104	0	2,506	551	0	698,703	2.10
1964	137,073	0	37	0	13,311	3,735	190,972	133,203	3,809	409,973	414	0	271	0	755,726	5.51
1965	307,192	0	394	0	102,570	421	1,535,858	80,851	3,332	201,220	271	497	22,731	0	1,948,144	6.34
1966	383,545	0	1,631	0	65,254	378	990,567	15,248	2,193	225,660	28	0	2,504	0	1,303,463	3.40
1967	328,000	0	2,728	0	16,157	163	99,357	6,078	13,406	96,629	1,537	0	0	0	236,054	0.72
1968	342,343	0	271	0	12,997	0	971,408	4,519	2,163	161,664	1,960	0	1,663	0	1,156,644	3.38
1969	366,589	0	0	0	12,747	153	279,429	63,258	1,313	84,120	486	0	2,251	0	443,757	1.21
1970	536,257	0	0	0	17,281	261	195,050	8,163	4,614	192,247	621	0	3,698	0	421,934	0.79
1971	671,668	0	569	0	22,138	0	800,515	67,483	3,873	454,039	385	264	6,763	0	1,356,029	2.02
1972	326,320	0	0	0	31,630	0	423,794	16,474	3,195	587,997	4,596	831	2,564	0	1,071,082	3.28
1973	533,047	0	0	0	19,627	0	753,970	121,231	0	324,538	1,425	511	1,812	0	1,223,113	2.29
1974	351,701	0	51	0	50,797	334	123,590	117,544	116	305,094	551	452	2,727	0	601,256	1.71
1975	308,914	0	0	0	19,977	1,826	71,732	55,434	1,010	447,233	1,057	396	34	2,437	601,137	1.95
1976	551,254	0	520	0	44,085	88	669,395	24,810	816	135,036	0	0	334	11,778	886,860	1.61
1977	482,247	0	102	0	59,211	389	1,687,898	12,701	6,990	337,281	0	3,492	1,655	44,852	2,154,571	4.47
1978	458,660	0	235	0	55,123	3,060	448,274	61,734	6,664	354,902	0	0	210	15,138	945,339	2.06
1979	385,694	0	1,241	0	533,050	671	3,195,846	57,155	4,133	68,046	223	422	805	1,350	3,862,941	10.02
1980	311,332	0	255	120,421	99,989	1,187	641,668	151,574	1,503	741,614	2,098	943	1,113	4,847	1,767,213	5.68
1981	438,540	0	532	0	155,923	1,112	938,072	75,567	4,289	664,383	510	1,112	259	2,819	1,844,578	4.21
1982	616,117	0	121	0	172,993	2,021	1,627,753	134,483	2,133	391,690	0	394	0	194	2,331,780	3.78
1983	426,177	0	0	19,136	79,674	3,905	209,772	37,475	285	211,457	2	3,596	0	466	565,767	1.33
1984	597,712	478	2,279	1,225	46,148	2,194	324,901	42,078	2,605	210,908	1,216	703	2,461	0	637,196	1.07
1985	377,516	156	501	510	36,677	638	376,202	73,568	20,665	249,837	1,091	1,202	9,240	3,500	773,787	2.05
1986	566,088	384	1,517	6,384	342,057	0	1,893,213	55,260	2,978	203,218	11,147	5,791	1,147	45	2,523,141	4.46
1987	589,291	2,325	0	961	145,616	1,027	727,158	75,666	8,944	433,856	2,904	6,072	31,613	745	1,436,887	2.44
1988	420,577	0	1,467	670	70,153	1,885	491,967	122,690	5,445	961,154	1,426	798	444	256	1,658,355	3.94
1989	384,004	32	4,416	5,832	213,429	2,749	1,035,809	143,882	4,145	268,597	1,258	2,032	20,155	1,452	1,703,788	4.44
1990	434,543	1,004	557	34,085	137,435	5,125	458,197	179,469	5,622	679,455	23	3,314	7,078	579	1,511,943	3.46
1991	657,511	720	502	1,823	108,526	333	1,198,209	36,077	1,208	123,111	1,082	620	2,998	811	1,472,402	2.05
1992	360,681	1,830	446	113,033	51,371	10,393	371,002	67,350	1,389	294,881	10,212			606		
1993	364,263	2,857	104	10,112	44,158	1,372	193,425	127,297						124		

-Continued-

Appendix B.1. (page 3 of 3)

Year	Parent Escapement	Age Composition[a] 0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	Total	Return/ Spawner
1994	766,909	234	653	0	89,234	1,093										
1995	366,163	1,520	1,262													
1996	450,725															
1997	396,668															
1998	410,659															

[a]Includes all escapement and catch including that from Southeastern District Mainland and Cape Igvak.
Does not include personal use or other subsistence sockeye salmon.

Appendix B.2. Total sockeye salmon to Chignik Lake by brood year and age, 1915 - 1998.

		Age Composition[a]														
Year	Parent Escapement	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	Total	Return/ Spawner
1915												4,514	4,514		9,028	
1916									11,874	690,450	9,120	2,007	0	0	713,451	
1917							339,637	149,163	296	274,036	0	0	0	0	763,132	
1918				0	44,358	0	201,318	195,611	0	999,888	0	2,948	2,966	0	1,447,089	
1919		0	0	0	100,404	2,425	243,024	286,119	2,492	423,094	8,270	0	5,828	0	1,071,656	
1920		0	0	0	148,914	0	435,826	137,704	2,509	300,319	20,713	0	1,567	0	1,047,552	
1921		0	0	0	101,251	0	216,728	278,711	4,085	193,620	2,245	955	3,396	0	800,991	
1922	352,807	0	0	0	43,667	0	382,956	73,351	0	991,979	14,972	2,886	4,175	0	1,513,986	4.29
1923	213,781	0	0	0	74,884	218	410,194	245,187	2,360	577,390	1,111	1,647	2,376	0	1,315,367	6.15
1924	910,521	0	0	0	126,685	1,819	1,003,422	8,350	1,115	102,217	5,830	425	55	0	1,249,918	1.37
1925	677,566	0	0	0	3,736	0	51,222	195,414	332	427,580	7,817	5,367	456	0	691,924	1.02
1926	695,314	0	0	0	25,764	919	279,018	304,619	3,461	879,220	3,821	55	2,246	0	1,499,396	2.16
1927	429,525	0	207	0	113,952	1,499	951,950	100,633	744	203,942	1,586	1,225	5,557	0	1,381,295	3.22
1928	1,020,520	0	0	0	40,063	0	353,506	77,224	12,047	300,603	3,129	1,042	1,618	0	789,232	0.77
1929	914,307	0	0	0	16,254	0	584,561	38,873	5,675	361,557	1,165	2,192	1,251	0	1,011,781	1.11
1930	359,405	0	0	0	26,688	0	426,128	41,867	6,177	344,419	16,565	2,065	0	0	863,909	2.40
1931	631,986	0	0	0	30,856	2,454	296,899	138,440	3,747	264,858	0	2,678	635	0	740,567	1.17
1932	1,113,859	0	0	0	24,809	0	475,759	46,764	8,530	185,288	2,049	13,674	1,502	0	758,375	0.68
1933	310,088	0	0	0	35,679	0	311,946	35,705	48,795	321,467	0	1,267	301	0	755,160	2.44
1934	447,642	0	0	0	19,716	90	708,212	33,934	4,066	88,027	969	4,299	1,026	0	860,339	1.92
1935	462,469	0	69	0	37,642	308	148,352	16,893	13,842	299,288	3,284	4,082	976	0	524,736	1.13
1936	376,838	0	0	0	9,342	43	504,624	57,326	13,186	284,707	3,117	9,326	2,233	0	883,904	2.35
1937	406,618	0	33	0	31,723	145	480,250	54,435	30,220	651,642	7,116	2,664	639	0	1,258,867	3.10
1938	305,827	0	111	0	30,143	137	1,099,657	124,382	8,660	186,504	2,032	1,128	270	0	1,453,024	4.75
1939	512,754	0	106	0	68,919	315	314,851	35,542	3,674	79,035	859	5,420	1,305	0	510,026	0.99
1940	152,957	0	244	0	19,705	90	133,474	15,039	17,705	380,481	4,130	10,049	2,422	0	583,339	3.81
1941	531,904	0	70	0	8,342	38	642,782	72,293	32,912	706,532	7,654	2,225	537	0	1,473,385	2.77
1942	516,621	0	30	0	40,124	183	1,194,007	134,060	7,305	156,659	1,695	4,662	1,112	0	1,539,837	2.98
1943	1,205,418	0	143	0	74,442	340	264,830	29,686	15,007	324,527	3,562	5,405	1,321	0	719,263	0.60
1944	351,212	0	266	0	16,492	75	547,139	62,179	18,110	385,087	4,101	2,886	711	0	1,037,046	2.95
1945	151,326	0	59	0	34,405	157	652,782	72,138	9,784	207,054	2,186	1,246	315	0	980,126	6.48
1946	739,884	0	121	0	40,246	183	351,541	38,531	4,401	91,579	937	1,531	371	0	529,441	0.72
1947	1,393,990	0	147	0	21,549	98	156,343	16,644	5,048	108,068	1,165	1,316	333	0	310,711	0.22
1948	313,319	0	80	0	9,390	42	182,792	20,430	4,658	96,858	989	826	0	0	316,065	1.01
1949	574,715	0	36	0	11,360	52	165,402	17,581	1,766	103,345	0	496	650	0	300,688	0.52
1950	861,070	0	41	0	9,924	45	199,966	31,411	2,206	245,826	407	2,903	1,820	0	494,549	0.57

-Continued-

Appendix B.2. (page 2 of 3)

Year	Parent Escapement	Age Composition[a] 0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	Total	Return/ Spawner
1951	490,899	0	38	0	33,082	0	618,729	13,748	7,046	242,042	0	1,028	0	0	915,713	1.87
1952	260,540	0	0	0	22,213	0	258,747	30,836	986	229,563	0	3,932	8,403	0	554,680	2.13
1953	221,408	0	0	0	9,167	428	125,399	32,350	470	396,916	1,935	934	5,424	0	573,023	2.59
1954	277,912	0	547	0	2,848	0	39,658	75,361	771	418,442	804	1,661	5,069	0	545,161	1.96
1955	201,409	0	369	0	32,187	0	303,988	32,708	168	363,162	1,252	0	0	0	733,834	3.64
1956	483,024	0	1,330	0	12,515	0	106,327	36,113	435	221,169	0	1,349	4,781	0	384,019	0.80
1957	328,779	0	0	0	17,746	622	232,393	109,475	351	332,661	2,104	1,189	1,319	0	697,860	2.12
1958	212,594	0	1,459	0	50,630	0	23,204	139,797	0	418,960	980	93	432	0	635,555	2.99
1959	308,645	0	3,286	0	18,094	907	109,165	81,640	117	197,975	738	689	187	0	413,025	1.34
1960	357,230	0	146	0	24,446	491	122,278	8,273	1,314	210,884	141	1,618	12,824	0	382,415	1.07
1961	254,970	0	718	0	1,899	799	109,935	18,702	220	401,733	2,698	5,335	2,420	0	544,459	2.14
1962	324,860	0	123	0	4,312	0	44,074	69,811	998	692,188	1,074	1,109	0	0	813,689	2.50
1963	200,314	0	0	0	5,536	1,300	103,116	68,605	29	243,939	0	1,501	867	0	424,893	2.12
1964	166,625	0	88	0	6,607	4,550	24,880	65,639	700	138,282	943	205	6,114	0	248,008	1.49
1965	163,151	0	1,636	0	25,157	5,547	159,113	57,942	382	650,181	1,028	659	96,111	0	997,756	6.12
1966	183,525	0	1,715	0	14,517	925	300,759	30,263	461	413,807	2,453	0	18,073	0	782,974	4.27
1967	189,000	0	501	0	6,187	768	78,308	31,097	701	482,538	2,780	1,342	0	0	604,221	3.20
1968	244,836	0	914	0	3,835	0	115,840	20,435	636	583,517	15,603	2,691	30,092	0	773,902	3.16
1969	132,055	0	0	0	1,239	1,062	85,064	270,966	818	487,805	7,288	0	16,722	0	871,247	6.60
1970	119,952	0	0	0	18,234	12,035	27,646	151,089	1,318	461,271	12,205	0	19,870	0	703,668	5.87
1971	232,501	0	1,500	0	15,448	12,620	185,532	410,628	236	1,898,372	4,096	2,842	13,887	0	2,545,161	10.95
1972	231,270	0	0	0	30,087	2,445	120,639	96,178	98	718,493	30,779	267	3,698	0	1,002,684	4.34
1973	247,144	0	0	0	5,778	10,740	56,736	173,028	0	919,784	3,852	1,248	4,756	0	1,175,922	4.76
1974	364,612	0	4,420	0	19,284	2,764	105,493	196,981	51	677,611	2,036	2,316	9,262	2,703	1,022,921	2.81
1975	314,084	0	0	0	24,550	7,125	123,634	185,390	914	859,629	3,573	6,449	2,334	7,609	1,221,207	3.89
1976	341,828	0	1,103	0	59,255	807	775,826	94,346	2,484	499,554	0	3,117	10	5,083	1,441,585	4.22
1977	463,561	0	252	0	52,795	3,975	155,472	59,987	1,958	1,207,619	0	2,034	789	7,477	1,492,358	3.22
1978	263,009	0	422	0	16,755	5,822	259,993	318,606	686	278,532	490	1,752	176	239	883,473	3.36
1979	317,889	0	2,029	0	102,991	5,057	281,909	28,124	1,235	278,237	388	1,469	784	3,223	705,446	2.22
1980	279,729	0	1,794	8,287	13,217	6,060	156,838	320,949	632	448,135	3,096	830	1,070	1,189	962,097	3.44
1981	301,092	0	1,116	0	88,980	5,093	232,004	74,324	664	370,421	151	649	74	35	773,511	2.57
1982	305,193	0	2,542	0	51,480	3,199	194,469	108,490	740	582,904	160	1,383	0	301	945,668	3.10
1983	441,561	0	0	2,715	12,125	3,824	148,143	109,807	208	1,105,502	807	11,621	76	0	1,394,828	3.16
1984	268,496	120	914	552	30,409	10,724	150,188	324,007	2,480	1,638,859	1,743	9,695	7,155	597	2,177,443	8.11
1985	369,262	98	689	207	18,638	16,398	174,283	161,966	6,682	501,843	1,161	4,112	3,789	173	890,039	2.41

-Continued-

Year	Parent Escapement	Age Composition[a] 0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Other	Total	Return/ Spawner
1986	207,231	103	2,745	13,060	179,104	321	345,786	175,958	1,834	497,777	7,787	12,896	2,149	619	1,240,139	5.98
1987	214,452	6,253	686	1,066	72,172	9,757	457,744	225,494	6,045	1,037,042	6,866	7,292	71,800	125	1,902,342	8.87
1988	255,180	0	2,430	1,115	57,578	3,326	295,438	109,596	2,118	206,346	4,081	10,594	8,802	1,268	702,692	2.75
1989	557,171	418	7,979	9,244	171,035	4,773	273,461	105,477	3,988	1,202,092	7,408	11,544	88,753	320	1,886,492	3.39
1990	335,867	447	442	6,049	26,006	1,321	366,364	186,817	1,947	463,728	1,800	2,170	16,440	890	1,074,421	3.20
1991	382,587	134	201	1,008	105,101	1,934	297,675	109,027	649	480,415	2,956	5,387	4,350	4,111	1,012,948	2.65
1992	405,922	628	1,107	22,469	18,620	12,535	219,422	204,719	2,436	572,892	62,690	1,064	20,603	377	1,117,895	2.75
1993	333,114	474	500	4,331	31,962	19,220	146,287	340,049	2,060	1,015,145	4,771					
1994	197,445	85	954	0	60,598	7,715	448,915	290,605								
1995	373,757	391	1,587	5,600	182,505	0										
1996	284,387	974	55													
1997	363,743															
1998	278,742															

[a] Includes all escapement and catch including that from Southeastern District Mainland and Cape Igvak. Does not include personal use or other subsistence sockeye salmon.

Appendix C. Chignik River system sockeye salmon escapement goals for the early run (primarily Black Lake) and the late run (primarily Chignik Lake) by time period.

The numbers of fish presented in the escapement tables below were derived from averages over several years of escapements of various timing and magnitude. It should be noted that daily escapement levels will fluctuate considerably throughout the run. The tables listed serve only as a guide for achieving the total escapement for each run. Inseason variations from the figures listed may be due to variations in actual timing and/or strength of the run.

Early Run-400,000 Escapement

Date	Lower	Upper
June 12		40,000
June 14	50,000 -	65,000
June 16	75,000 -	100,000
June 18	125,000 -	150,000
June 20	175,000 -	200,000
June 22	225,000 -	250,000
June 25	275,000 -	325,000
June 30	350,000 -	400,000

Late Run-250,000 Escapement to August 31

Date	Early Escapement Is Achieved		Early Escapement Is Not Achieved	
July 6				40,000
July 8			45,000 -	50,000
July 10	-	40,000	55,000 -	65,000
July 12	50,000 -	60,000	70,000 -	75,000
July 14	65,000 -	75,000	75,000 -	80,000
July 16	80,000 -	90,000	80,000 -	90,000
July 19	100,000 -	115,000	100,000 -	115,000
July 21	125,000 -	135,000	125,000 -	135,000
July 23	145,000 -	160,000	150,000 -	160,000
July 26	170,000 -	180,000	170,000 -	180,000
July 29	185,000 -	195,000	190,000 -	195,000
July 31	195,000 -	200,000	195,000 -	200,000
August 31	200,000 -	250,000	200,000 -	250,000

Appendix D. List of management actions (emergency orders) and dates of actions, duration of actions, and districts in which actions occurred for the Chignik Management Area, 1998.

Emergency Order No.	Management Action	Date of Action	Duration of Action (hrs)	District in Which Management Action Was Warranted
2	Open	June 16-17	24	Chignik Bay, Central, and Eastern Districts
3	Extend	June 17-18	24	Chignik Bay, Central, and Eastern Districts
4	Extend	June 18-19	24	Chignik Bay, Central, and Eastern Districts
5	Extend	June 19-20	24	Chignik Bay, Central, and Eastern Districts
6	Extend	June 20-21	24	Chignik Bay, Central, and Eastern Districts
7	Extend	June 21-22	24	Chignik Bay, Central, and Eastern Districts
8	Extend	June 22-23	24	Chignik Bay, Central, and Eastern Districts
9	Extend	June 23-24	24	Chignik Bay, Central, and Eastern Districts
10	Extend	June 24-25	24	Chignik Bay, Central, and Eastern Districts
11	Extend	June 25-26	24	Chignik Bay, Central, and Eastern Districts
12	Extend	June 26-27	24	Chignik Bay, Central, and Eastern Districts
13	Extend	June 28-Further Notice		Chignik Bay, Central, and Eastern Districts
18	Close	July 12		Chignik Bay, Central, and Eastern Districts
14	Open	July 3	6	Ivanof Bay
15	Extend	July 3	6	Ivanof Bay
16	Extend	July 4	9	Ivanof Bay
17	Extend	July 4	6	Ivanof Bay
Closed				
19	Open	July 13-16	72	Chignik Bay and Central Districts
21	Extend	July 16-17	24	Chignik Bay and Central Districts
19	Open	July 13-14	36	Western and Perryville Districts
20	Extend	July 14-15	24	Western and Perryville Districts
21	Extend	July 15-16	36	Western and Perryville Districts
Closed				
22	Open	July 18-20	48	Chignik Bay and Central Districts
23	Extend	July 20-22	48	Chignik Bay and Central Districts
24	Extend	July 22-23	28.5	Chignik Bay and Central Districts
23	Open	July 20-21	36	Western and Perryville Districts
24	Extend	July 22-23	24	Western and Perryville Districts
25	Extend	July 22-23	16.5	Western and Perryville Districts
Closed				
26	Open	July 25-28	72	Chignik Bay and Central Districts
26	Open	July 26-27	48	Eastern, Western, and Perryville Districts
Closed				
27	Open	July 28-August 1	72	Chignik bay and Central Districts
27	Open	July 30-31	48	Eastern, Western, and Perryville Districts
Closed				
28	Open	August 2-7	120	Chignik bay and Central Districts
28	Open	August 3-6	96	Western, and Perryville Districts

-Continued-

Emergency Order No.	Management Action	Date of Action	Duration of Actio	District in Which Management Action Was Warranted
28	Open	August 3-5	72	Eastern District
Closed				
30	Open	August 9-13	96	Chignik Bay and Central Districts
32	Extend	August 13-14	24	Chignik Bay and Central Districts
30	Open	August 10-12	72	Western and Perryville Districts
32	Extend	August 12-13	24	Western and Perryville Districts
30	Open	August 10-12	72	Eastern District
32	Extend	August 12-13	24	Eastern District
Closed				
33	Open	August 16-21	120	Chignik Bay and Central Districts
33	Open	August 16-20	109	Western and Perryville Districts
33	Open	August 16-21	120	Eastern Districts
Closed				
35	Open	August 23-26	72	Chignik Lagoon and Central Districts
36	Extend	August 26-28	48	Chignik Lagoon and Central Districts
35	Open	August 23-27	72	Eastern District
36	Extend	August 26-28	48	Eastern District
Closed				
37	Open	August 29-September 1	72	Chignik Lagoon and Central Districts
37	Open	August 29-September 1	72	Eastern
Closed				
38	Open	September 2-4	48	Chignik Lagoon, Central Districts
38	Open	September 2-4	48	Eastern
39	Open	September 6-7	48	Chignik Lagoon, Central Districts
39	Open	September 6-7	48	Eastern
40	Open	September 9-10	48	Chignik Lagoon, Central Districts
40	Open	September 9-10	48	Eastern
41	Open	September 14-15	48	Chignik Lagoon, Central Districts
41	Open	September 14-15	48	Eastern

Appendix E. Chignik Salmon regulations, 1998.

CHAPTER 15. CHIGNIK AREA

PLEASE NOTE THAT AS OF 1998 ALL LONGITUDE AND LATITUDE COORDINATES IN THE CHIGNIK AREA HAVE BEEN CONVERTED TO DECIMAL MINUTES AND ARE BASED ON THE NORTH AMERICAN DATUM OF 1983.

ARTICLE 01. DESCRIPTION OF AREA

5 AAC 15.001. APPLICATION OF THIS CHAPTER. Requirements set forth in this chapter apply to commercial fishing only, unless otherwise specified. Subsistence fishing regulations affecting commercial fishing vessels or affecting any other commercial fishing activity are set forth in the subsistence fishing regulations in chs. 01 and 02 of this title.

5 AAC 15.100. DESCRIPTION OF AREA. The Chignik Area includes all waters of Alaska on the south side of the Alaska Peninsula enclosed by 156°20.22' W. long., (the longitude of the southern entrance to Imuya Bay) then due south, and a line extending 135 southeast from Kupreanof Point.

ARTICLE 02. FISHING DISTRICTS

5 AAC 15.200. FISHING DISTRICTS. (a) The Eastern District includes all waters from the latitude of the southernmost ADF&G regulatory marker 500 yards from the mouth of Aniakchak Lagoon to the eastern boundary of the Chignik Area.

(1) Agripina Section: all waters bounded by the eastern boundary of the Chignik Area described in 5 AAC 15.100 and a line extending 130 from Cape Providence at 56° 58.67' N. lat., 156° 33.47' W. long.;

(2) Chiginagak Section: all waters bounded by a line extending 130 from Cape Providence at 56° 58.67' N. lat., 156° 33.47' W. long., and a line extending 150 from Cape Kuyuyukak at 56° 53.85' N. lat., 156° 49.72' W. long.;

(3) Nakalilok-Yantarni Section: all waters bounded by a line extending 150 from Cape Kuyuyukak at 56° 53.85' N. lat., 156° 49.72' W. long., the longitude of Cape Kunmik at 56° 45.88' N. lat., 157° 12.05' W. long.,

(4) Big River Section: all waters of Amber and Aniakchak Bays bounded by 157° 12.05' W. long., and the latitude of the southernmost ADF&G regulatory marker 500 yards from the mouth of Aniakchak Lagoon.

(b) The Chignik Bay District includes all waters of Chignik Bay and Lagoon west of a line from a point near Jack Bay at 56° 17.60' N. lat., 158° 12.80' W. long., to Neketa Creek at 56° 24.12' N. lat., 158° 27.73' W. long.

(c) The Western District includes all waters south and west of Jack Point at 56° 16.40' N. lat., 158° 12.50' W. long., excluding the waters of Chignik Lagoon, to Coal Cape at 55° 53.42' N. lat., 159° 00.45' W. long.

(1) Castle Cape Section: all waters between Jack Point at 56° 17.48' N. lat., 158° 12.50' W. long., and Cape Ikti at 55° 58.75' N. lat., 158° 30.00' W. long.;

(2) Dorner Bay Section: all waters between Cape Ikti at 55° 58.75' N. lat., 158° 30.00' W. long., and a point on the west side of Dorner (Kuiukta) Bay's entrance at 55° 57.00' N. lat., 158° 40.00' W. long.;

(3) Mitrofania Section: all waters, including Mitrofania Island, between a point on the west side of Dorner (Kuiukta) Bay's entrance at 55° 57.00' N. lat., 158° 40.00' W. long., and Stirini Point at 55° 54.73' N. lat., 158° 55.27' W. long.;

-Continued-

(4) Anchor Bay Section: all waters between Stirni Point at 55° 54'73"N. lat., 158° 55.25'W. long., and Coal Cape at 55° 53.42' N. lat., 159° 00.20' W. long.

(d) The Perryville District includes all waters between Coal Cape at 55° 53.42' N. lat., 159° 00.45' W. long., and Kupreanof Point at 55° 33.98' N. lat., 159° 35.88' W. long.

(1) Perryville Section: all waters, including the Chiachi Islands, between Coal Cape at 55° 53.42' N. lat., 159° 00.45'W. long., and Coal Point at 55° 51.47' N. lat., 159° 18.95' W. long.;

(2) Humpback Bay Section: all waters, including Paul and Jacob Islands, between Coal Point at 55° 51.47' N. lat., 159° 18.95' W. long., and Alexander Point at 55° 47.32' N. lat., 159° 24.68' W. long.;

(3) Ivanof Bay Section: all waters between Alexander Point at 55° 47.32' N. lat., 159° 24.68' W. long., and Kupreanof Point at 55° 33.98' N. lat., 159° 35.88' W. long.

(e) The Central District includes all waters, excluding the waters of the Chignik Bay District, between a point near Jack Bay at 56° 18.23' N. lat., 158° 15.02' W. long., and the southernmost marker 500 yards from the mouth of Aniakchak Lagoon.

(1) Cape Kumlik Section: all waters, including Sutwik Island, between the latitude of the southernmost marker 500 yards from the mouth of Aniakchak Lagoon and 157° 40.53' W. long. on the southwest side of Cape Kumilk;

(2) Kujulik Section: all waters between a point on the southwest side of Cape Kumlik at 56° 36.48' N. lat., 157° 40.53' W. long., and a point on Cape Kumliun at 56° 28.58' N. lat., 157° 51.55' W. long.;

(3) Outer Chignik Bay Section: all waters, including Nakchamik Island, between a point on Cape Kumliun at 56° 28.58' N. lat., 157° 51.55' W. long., and a point near Jack Bay at 56° 18.23' N. lat., 158° 15.02' W. long., excluding the Chignik Bay District.

ARTICLE 03. SALMON FISHERY

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken only from June 1 through October 31.

(b) The Perryville, Western, Central and Eastern Districts are opened by emergency order.

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) Salmon fishing periods shall be established by emergency order.

5 AAC 15.330. GEAR. (a) Salmon may be taken only by purse seine and hand purse seine.

5 AAC 15.332. SEINE SPECIFICATIONS AND OPERATIONS. (a) In the Eastern, Central, Western and Perryville Districts no purse seine less than 100 fathoms or more than 225 fathoms in length may be used.

(b) In the Eastern, Central, Western and Perryville Districts no hand purse seine less than 100 fathoms or more than 225 fathoms in length may be used.

(c) In the Chignik Bay District, purse seines and hand purse seines may not be less than 100 fathoms or more than 125 fathoms in length.

-Continued-

(d) No seine may be less than three fathoms nor more than 375 meshes in depth; in addition, up to twenty-five meshes of chafing gear with a maximum mesh size of seven inches may be used.
Appendix E. (page 3 of 5)

(e) No lead may be more than 75 fathoms in length. The aggregate length of seine and lead may not be more than 225 fathoms in the Eastern, Central, Western and Perryville Districts.

(f) When a purse seine or hand purse seine is in the water for the purpose of taking fish, the seine shall be attached to the licensed vessel operating
the gear.

5 AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:

(1) Chignik Lagoon:

(A) southwest of a line from the tip of Hume Point to the northside of Chignik Island (56° 17.42' N. lat., 158° 35.50' W. long.);

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56° 16.63' N. lat., 158° 34.90' W. long.);

(2) Kilokak Rocks Bay: northwest of a line from the southern entrance of the bay at 57° 09.78' N. lat., 156° 20.78' W. long., then to the opposite shore 500 yards northeast of the mouth of Kilokak Rocks Creek at 57° 10.07' N. lat., 156° 20.78' W. long.;

(3) Agripina River: west of a line from 57° 06.72' N. lat., 156° 28.22' W. long., to 57° 06.44' N. lat., 156° 28.67' W. long.;

(4) Chiganagak Bay: north of a line from 57° 00.50' N. lat., 156° 45.75' W. long., to 57° 01.68' N. lat., 156° 41.97' W. long.;

(5) Nakalilok Lagoon: the lagoon and within 500 yards of the entrance;

(6) Yantarni Lagoon: the lagoon and within 500 yards of the entrance;

(7) Aniakchak River: northwest of a line from approximately 500 yards northeast of the mouth at 56° 45.86' N. lat., 157° 28.88' W. long., to an ADF&G regulatory marker on the southern tip of the island directly off the mouth and then to approximately 1,000 yards southwest of the mouth at 56° 45.28' N. lat., 157° 31.53' W. long.;

(8) Aniakchak Lagoon: the lagoon and within 500 yards of the entrance;

(9) Kujulik Bay: the southwest end of the bay southwest of a line from 56° 35.85' N. lat., 157° 59.12' W. long., to the opposite shore at 56° 34.50'N. lat., 157° 54.63' W. long.;

(10) Portage Bay: west of a line from 56° 11.68' N. lat., 158° 33.07' W. long., to 56° 10.58' N. lat., 158° 33.07' W. long.;

(11) Ivan Bay: north of a line from the ADF&G regulatory marker on the northwest shore, 1,000 yards from the stream mouth, to the ADF&G regulatory marker on the southeast shore 750 yards from the stream mouth;

-Continued-

(12) Humpback Bay: within 1,000 yards of the terminus of Humpback Bay stream at 55° 52.68' N. lat., 159° 20.12' W. long.;

(13) Ivanof Bay: all waters northwest of a line from a point on the northeast shore at 55° 52.42' N. lat., 159° 28.40' W. long., to a point on the north end of the spit at 55° 50.95' N. lat., 159° 31.02' W. long. (all waters northwest of Road Island are closed);

(14) Alfred Creek: before August 1, the 500-yard closure at the terminus described in 5 AAC 39.290 does not apply; the 500-yard closure does apply from August 1 to the end of the salmon fishing season;

(15) Dago Frank Creek: before August 1, the 500-yard closure at the terminus described in 5 AAC 39.290 does not apply; the 500-yard closure does apply from August 1 to the end of the salmon fishing season;

(16) Hook Bay: northwest of a line from the tip of Hook Bay Spit at 56° 30.07' N. lat., 158° 08.18' W. long., to a point northwest of the spit at 56° 30.61' N. lat., 158° 09.27' W. long.;

(17) unnamed stream at 55° 48.98' N. lat.; 159° 24.45' W. long.; the 500-yard closure at the terminus described in 5 AAC 39.290 does not apply;

(18) Lake Bay: all waters southwest of a line drawn at the entrance to Lake Bay at 56° 18.80' N. lat., 158° 17.62' W. long., extending across the entrance to Lake Bay to a point at 56° 18.32' N. lat., 158° 16.20' W. long.;

(19) Mud Bay: all waters southwest of a line from 56° 19.42' N. lat., 158° 25.10' W. long., extending across the entrance to Mud Bay;

(20) from July 6 through August 31, all waters of Alaska in the Ivanof Bay Section, between a line extending 135 from Kupreanof Point at 55° 33.98' N. lat., 159° 35.88' W. long., and a line extending 65 from 55° 34.90' N. lat., 159° 37.10' W. long.

5 AAC 15.355. REPORTING REQUIREMENTS. (a) The operator of a floating salmon processing vessel or tender, or a shorebased processing operation, and a company employing aircraft used for transporting salmon, shall report in person, or by radio or telephone, to a local representative of the department located in the management area of intended operation before the start of processing or buying operations. The report must include the location and the date of intended operation, and identify and describe each vessel or other method of transport employed in hauling or processing salmon.

(b) A commercial fisherman shall report, on an ADF&G fish ticket at the time of landing, the number of salmon taken but not sold.

5 AAC 15.357. CHIGNIK AREA SALMON MANAGEMENT PLAN. (a) The department shall manage the commercial salmon fishery in the Chignik Area in accordance with the guidelines set out in the management plan under this section. The goal of this management plan is to allow traditional fisheries in the area to be conducted on Chignik Area salmon stocks, and to achieve the department's biological escapement goals for both Black Lake (early-run) and Chignik Lake (late-run) sockeye salmon and local stocks of pink, chum, coho, and chinook salmon.

(b) In the Chignik Bay and Central Districts, the commercial salmon fishery shall open concurrently based on escapement objectives for the Chignik Lakes' system sockeye salmon runs, except that

(1) the first fishing period shall occur when the following conditions have been met

-Continued-

(A) a minimum escapement of 40,000 sockeye salmon past the weir at Chignik River by June 12 or until a subsequent interim escapement goal is achieved; and

(B) there is a strong buildup of sockeye salmon in Chignik Lagoon, as indicated by the department's test fishing program;

(2) during the period of transition from the predominance of the early-run sockeye salmon to that of the late-run sockeye salmon, (usually late June through mid-July), the commissioner shall open and close, by emergency order, the fishing periods to harvest surplus early-run sockeye salmon without jeopardizing the late-run sockeye salmon escapement objectives;

(3) from the end of the transition period, described in (2) of this subsection until September 14, the commissioner shall open and close, by emergency order, fishing periods in the Chignik Bay and Central Districts based on the Chignik Lakes' system sockeye salmon escapement goals; the commissioner may take additional emergency order actions to protect or harvest local pink, chum, chinook and coho salmon runs; and

(4) beginning September 15, fishing periods in the Chignik Bay and Central Districts may be no more than 48-hours per week, and shall be based on the department's evaluation of the sockeye salmon run strength and the subsistence needs for Chignik Lake late-season sockeye salmon.

(c) In the Eastern District,

(1) during June, the commercial salmon fishery shall open concurrently with the Chignik Bay and Central Districts, and the openings shall be based on achieving the Black Lake sockeye salmon escapement goals;

(2) from approximately June 26 through July 9,

(A) the department shall evaluate the strength of the sockeye salmon late run; and

(B) in order to continue managing the Black Lake sockeye salmon harvest and escapement, while assessing the Chignik Lake sockeye salmon run strength, commercial salmon fishing in the Eastern District will, in the department's discretion, be disallowed or severely restricted;

(3) from the end of the transition period, described in (b)(2) of this section, until the end of the fishing season, the department shall manage the commercial salmon fishery based on its evaluation of local pink, chum, and coho salmon runs, and the escapement objectives of the Chignik Lakes' system sockeye salmon.

(d) In the Western and Perryville Districts, the department may open the commercial salmon fishery beginning July 6, except that

(1) from approximately late June to mid-July (transition period),

(A) the department shall evaluate the strength of the sockeye salmon late run; and

(B) in order to allow the department to assess the Chignik Lake run strength, commercial salmon fishing in the Western and Perryville Districts will, in the department's discretion, be disallowed or severely restricted;

(2) from the end of the transition period, described in (b)(2) of this section, until approximately August 20, fishing periods shall be based on the department's evaluation of local pink and chum salmon runs, and its evaluation of the Chignik Lake sockeye salmon run; and

-Continued-

(3) from approximately August 20 until the end of the fishing season, fishing periods shall be based on the department's evaluation of local coho salmon runs, and its evaluation of the Chignik Lake sockeye salmon run.

5 AAC 15.360. EASTERN DISTRICT SALMON MANAGEMENT PLAN. (a) The department shall open and close the Eastern District for commercial salmon fishing concurrently with the Chignik Bay and Central districts. The department may close the Eastern District for the period between the first (Black Lake) and second (Chignik Lake) sockeye salmon runs.

(b) The department shall close the Eastern District on July 15 to allow evaluation of the strength of the pink and chum salmon runs.

(c) The department shall close the Eastern District when it determines that the salmon being harvested in that district are from stocks that do not originate from spawning areas located in the Chignik Area.

ARTICLE 9. CHIGNIK AREA.

(REGISTRATION AREA L).

5 AAC 27.550. DESCRIPTION OF CHIGNIK AREA.

The Chignik Area includes all waters of Alaska on the south side of the Alaska Peninsula enclosed by 156° 20.22' W. long. (the longitude of the southern entrance to Imuya Bay near Kilokak Rocks) and a line extending southeast (135°) from the southernmost tip of Kupreanof Point at 55° 33.98' N. lat., 159° 35.88' W. long.

5 AAC 27.555. DESCRIPTION OF CHIGNIK AREA DISTRICTS.

Districts are as described in 5 AAC 15.200.

5 AAC 27.560. FISHING SEASONS AND WEEKLY FISHING PERIODS FOR CHIGNIK AREA. (a) Herring may be taken from April 15 through June 30 (sac roe season) and from August 15 through February 28 (food and bait season).

(b) Herring may be taken only during periods established by emergency order.

(c) A CFEC permit holder must register with the department before participating in the food and bait fishery.

5 AAC 27.565. LAWFUL GEAR FOR CHIGNIK AREA.

(a) Herring may be taken only by purse seines.

(b) A herring fishing vessel may operate or assist in operating only one legal limit of herring fishing gear in the aggregate.

(c) Unhung gear sufficient for mending purposes may be carried aboard fishing vessels.

(d) Herring fishing nets shall be measured, either wet or dry, by determining the maximum length of cork line when the net is fully extended with traction applied at one end only.

(e) The interim-use or entry permit holder is responsible for operation of the net.

(f) The use of leads with any net gear used for commercial herring fishing is prohibited during the herring sac roe season.

5 AAC 27.575. SEINE SPECIFICATIONS AND OPERATIONS FOR CHIGNIK AREA.

A purse seine may not be more than 1,000 meshes in depth or more than 100 fathoms in length.

5 AAC 27.580. WATERS CLOSED TO HERRING FISHING IN CHIGNIK AREA.

During the period June 12 - October 31, herring may not be taken in waters described in 5 AAC 15.350 and 5 AAC 39.290.

5 AAC 27.590. BUYER AND TENDER REPORTING REQUIREMENTS FOR CHIGNIK AREA. In addition to the requirements of 5 AAC 39.130(g), each tender operator and each buyer or the tender operator or buyer's agent shall report in person to and register with a local representative of the department upon arrival in the registration area before commencing operations and before changing location of the operation. Each buyer or buyer's agent shall

(1) identify all vessels to be employed in transporting or processing herring and shall register those vessels with a local representative of the department located in the registration area before transporting or processing herring;

(2) make daily reports of all herring purchased from fishermen, and other processing records as specified by a local representative of the department; and

(3) submit fish tickets before departure from the area and no later than 10 days after termination of buying operations in the area, or as otherwise specified by a local representative of the department.